



**MARICOPA ASSOCIATION OF GOVERNMENTS
GROWING SMARTER IMPLEMENTATION:
TASK 6.1 - DEMOGRAPHIC TRENDS**

FINAL REPORT

Prepared by:

*Applied Economics
14682 N. 74th Street, Suite 100
Scottsdale, Arizona 85260*

Prepared for:

*Maricopa Association of Governments
302 North 1st Avenue, Suite 300
Phoenix, Arizona 85003*

**AUGUST 30, 2001
FINAL REVISION: MAY 23, 2003**

TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	HISTORIC TRENDS	3
2.1	TOTAL POPULATION	3
2.2	AGE COMPOSITION	4
2.3	RACE AND HISPANIC ORIGIN	5
2.4	POPULATION BY RACE, GENDER, AND AGE.....	8
3.0	VITAL STATISTICS.....	15
3.1	BIRTHS	15
3.2	MORTALITY	25
4.0	MIGRATION	32
4.1	INTERNAL REVENUE SERVICE MIGRATION DATA.....	32
4.2	IMMIGRATION AND NATURALIZATION SERVICES DATA	35
4.3	STUDY MIGRATION ESTIMATES.....	38
4.3.1	RACIAL POPULATION TRENDS.....	41
4.3.2	HISPANIC MIGRATION AND DEMOGRAPHIC TRENDS	50
5.0	EDUCATION AND LABOR FORCE CHARACTERISTICS	54
5.1	EDUCATION.....	54
5.2	LITERATURE REVIEW ON LABOR FORCE PARTICIPATION.....	61
5.2.1	HISTORICAL TRENDS IN LABOR FORCE PARTICIPATION	61

5.2.2	PROJECTED LABOR FORCE PARTICIPATION.....	63
5.2.3	SUMMARY.....	65
5.3	LABOR FORCE TRENDS FOR MARICOPA COUNTY.....	65
5.4	CONCLUSIONS FOR MARICOPA COUNTY	79
5.5	PROJECTED LABOR FORCE PARTICIPATION, MARICOPA COUNTY....	79
5.6	PROJECTED LABOR FORCE	83
APPENDIX A – Figures 1 through 14		85
APPENDIX B – Tables 1 through 28.....		93

LIST OF FIGURES

FIGURE 2-1	Total Population, 1980-2000.....	3
FIGURE 2-2	Total Population and Growth Rate, 1980-2000.....	3
FIGURE 2-3	Population by Age Cohort, 1980-2000	4
FIGURE 2-4	Population Growth by Age, 1980-2000	5
FIGURE 2-5	Population by Race and Hispanic Origin, 1980-2000.....	6
FIGURE 2-6	Population Growth by Race and Hispanic Origin, 1980-2000.....	6
FIGURE 2-7	Population Composition by Race and Hispanic Origin, 1980, 2000	7
FIGURE 2-8	Race as a Percentage of Total, 1980-2000	7
FIGURE 2-9	Population by Race and Hispanic Origin, Gender, and Age, 1980	9
FIGURE 2-10	Population by Race and Hispanic Origin, Gender, and Age, 1985	10
FIGURE 2-11	Population by Race and Hispanic Origin, Gender, and Age, 1990	11
FIGURE 2-12	Population by Race and Hispanic Origin, Gender, and Age, 1995	12
FIGURE 2-13	Hispanic Female Population, 1980-1995	13
FIGURE 2-14	Hispanic Male Population, 1980-1995	14
FIGURE 2-15	Average Hispanic Male and Female Share of Population.....	14
FIGURE 3-1	Births by Race, Hispanic Origin, Baby's Gender, Select Years.....	16
FIGURE 3-2	Births by Age of Mother at Time of Birth, Select Years.....	16
FIGURE 3-3	Total Births, 1980-95.....	17
FIGURE 3-4	Births by Race, Hispanic Origin, Baby's Gender, 1980.....	18
FIGURE 3-5	Births by Race, Hispanic Origin, Baby's Gender, 1985.....	18
FIGURE 3-6	Births by Race, Hispanic Origin, Baby's Gender, 1990.....	19
FIGURE 3-7	Births by Race, Hispanic Origin, Baby's Gender, 1995.....	19
FIGURE 3-8	Total Hispanic Births, 1980-1995	20
FIGURE 3-9	Total White Births, 1980-1995	20
FIGURE 3-10	Total Births for Select Race Categories, 1980-1995.....	21

FIGURE 3-11	Birthrates by Mother's Age and Race, 1980-1995	22
FIGURE 3-12	Birthrate by Mother's Age, 1980-1995.....	23
FIGURE 3-13	Average Birthrates by Mother's Age, Race, and Hispanic Origin	24
FIGURE 3-14	White and Hispanic Birthrates, 1980, 1995	24
FIGURE 3-15	Deaths by Age, Select Years.....	26
FIGURE 3-16	Deaths by Race and Hispanic Origin, Select Years.....	26
FIGURE 3-17	Deaths by Race, Age, and Gender, 1980	27
FIGURE 3-18	Deaths by Race, Age, and Gender, 1985	28
FIGURE 3-19	Deaths by Race, Age, and Gender, 1990	29
FIGURE 3-20	Deaths by Race, Age, and Gender, 1995	30
FIGURE 3-21	Deaths in Select Race Groups, 1980-1995.....	31
FIGURE 4-1	Migratory Movements.....	32
FIGURE 4-2	Migratory Movements.....	33
FIGURE 4-3	Top 15 States, Net Migration.....	34
FIGURE 4-4	Top 15 Metropolitan Areas, Net Migration.....	34
FIGURE 4-5	Immigrants Admitted to Arizona.....	35
FIGURE 4-6	Immigrants Admitted to Phoenix	36
FIGURE 4-7	Estimated Illegal Immigrant Population.....	36
FIGURE 4-8	Aliens Expelled by Phoenix District Office.....	37
FIGURE 4-9	Aliens Expelled by District Office.....	37
FIGURE 4-10	Deportable Aliens Located by Border Patrol.....	38
FIGURE 4-11	Total Net Migration, 1980-1995	39
FIGURE 4-12	Total Net Migration by Age Cohort, 1980-1995	40
FIGURE 4-13	Female Net Migration by Age Cohort, 1980-1995.....	40
FIGURE 4-14	Male Net Migration by Age Cohort, 1980-1995.....	41
FIGURE 4-15	Net Migration by Age, Race, and Gender 1980-1985	42
FIGURE 4-16	Net Migration by Age, Race, and Gender 1985-1990	43

FIGURE 4-17	Net Migration by Age, Race, and Gender 1990-1995	44
FIGURE 4-18	Net Migration, White Females, 1980-1995.....	45
FIGURE 4-19	Net Migration, White Males, 1980-1995.....	45
FIGURE 4-20	Net Migration, Black Females, 1980-1995	46
FIGURE 4-21	Net Migration, Black Males, 1980-1995	46
FIGURE 4-22	Net Migration, American Indian Females, 1980-1995.....	47
FIGURE 4-23	Net Migration, American Indian Males, 1980-1995.....	47
FIGURE 4-24	Net Migration, Asian Females, 1980-1995	48
FIGURE 4-25	Net Migration, Asian Males, 1980-1995	48
FIGURE 4-26	Net Migration, Other Females, 1980-1995.....	49
FIGURE 4-27	Net Migration, Other Males, 1980-1995	49
FIGURE 4-28	Hispanic Share of Total Population, 1980-1995.....	50
FIGURE 4-29	Hispanic Share of Total Population, 1980-1995.....	50
FIGURE 4-30	Hispanic Migration as Percentage of Total, 1980-1995.....	51
FIGURE 4-31	Net Migration, Hispanic Females, 1980-1995.....	52
FIGURE 4-32	Net Migration, Hispanic Males, 1980-1995	53
FIGURE 5-1	Educational Attainment by Gender, 1980.....	54
FIGURE 5-2	Educational Attainment by Race and Gender, 1980.....	55
FIGURE 5-3	Educational Attainment by Race and Gender, 1990.....	56
FIGURE 5-4	Educational Attainment by Gender, 1990.....	57
FIGURE 5-5	Educational Attainment by Race, 1980	58
FIGURE 5-6	Educational Attainment by Race, 1990	58
FIGURE 5-7	Educational Attainment, Asian and White, 1990.....	59
FIGURE 5-8	Hispanic Educational Attainment, 1990.....	59
FIGURE 5-9	Educational Attainment, Select Groups, 1980.....	60
FIGURE 5-10	Educational Attainment, Select Groups, 1990.....	60
FIGURE 5-11	Change in Labor Force Participation by Age and Sex.....	62
FIGURE 5-12	Projected U.S. Labor Force Participation by Age and Sex	63

FIGURE 5-13	Projected Labor Force Participation by Race/Ethnicity and Gender.....	65
FIGURE 5-14	Labor Force, Unemployment, Participation Rate by Race and Gender, 1980.....	67
FIGURE 5-15	Labor Force, Unemployment, Participation Rate by Race and Gender, 1980.....	68
FIGURE 5-16	Unemployment Rate by Race, 1980, 1990.....	69
FIGURE 5-17	Unemployment Rate by Gender and Sex, 1990.....	69
FIGURE 5-18	Labor Force Participation Rates by Age Select Races, 1990	70
FIGURE 5-19	Labor Force Participation Rates by Age Select Races, 1990	70
FIGURE 5-20	Labor Force Participation Rates by Race and Gender, 1990.....	71
FIGURE 5-21	Female Labor Force Participation Rates by Race.....	71
FIGURE 5-22	National Labor Force Participation Rates, 1980.....	73
FIGURE 5-23	National Labor Force Participation Rates, 1990.....	74
FIGURE 5-24	Labor Force Participation Rates by Age Cohort, 1980, 1990.....	75
FIGURE 5-25	Labor Force Growth Compared to Population Growth, 1998-2008	75
FIGURE 5-26	Average Annual Labor Force Growth, 1998-2008	76
FIGURE 5-27	Average Annual Population Growth, 1998-2008.....	77
FIGURE 5-28	Labor Force Growth Compared to Population Growth, 1998-2008	78
FIGURE 5-29	Projected U.S. Labor Force Participation Rates by Sex and Age.....	79
FIGURE 5-30	Projected U.S. Labor Force Participation Rates by Age, Sex and Race.....	80
FIGURE 5-31	Labor Force Participation, Maricopa County and U.S., 1990	81
FIGURE 5-32	Labor Force Participation, Maricopa County, 2000.....	82
FIGURE 5-33	Projected Maricopa County Labor Force Participation 2000-2025	82
FIGURE 5-34	Projected Labor Force by Race, Maricopa County, 2000-2040	84

1.0 INTRODUCTION

This report presents the results of the MAG Growing Smarter Implementation Project (GSI), Task 6.1: Demographic Trends Analysis. The objectives of this task are to establish a base of demographic information for Maricopa County, and to analyze that data for trends that can be used to predict future population and labor force characteristics. Later work on the MAG GSI project (Task 7.1) will use this information, along with GSI scenario demographic projections from MAG and Age/Sex projections from the Arizona Department of Economic Security, to project demographic (age/sex/race) and labor force characteristics for Maricopa County through 2040.

The information in these chapters shows a fast growing and diversifying population in Maricopa County. Among the more significant findings are the following: large increase in the number of very young and very old people; the widening of the birth rate curve toward older women especially for Whites; the sharp rise of the Hispanic population of all ages; modest growth of the Black and Asian populations; and the steady attraction of prime working-age persons (age 20 to 34). The analysis also shows a significant increase in the Hispanic share of the population, with an even larger share of births but a smaller share of deaths.

The balance of this report is organized into four chapters. Chapter 2 details historic demographic data for Maricopa County including population by gender, race and Hispanic origin, and age cohorts. Preliminary results from the 2000 Census were included when applicable. Chapter 3 includes natality and mortality data collected from the Arizona Department of Health. These vital statistics are necessary in order to project the natural population growth in Maricopa County. Again, the data presented in this chapter includes detailed gender, age, and race and ethnicity in order to create a natural population growth model to permit the determination of the characteristics of migration from 1980 through 1995.

Since migration is a major factor in the population growth of Maricopa County over the past 20 years, Chapter 4 presents an analysis of migratory trends from a variety of sources. Migration data from the Internal Revenue Service and the Immigration and Naturalization Service provides insight into the amount and origin of migration to and from Maricopa County. The bulk of the chapter is dedicated to the migration analysis based on the natural growth population derived from vital statistics and the Census totals presented in the Chapters 2 and 3. The net migration data is presented by race and Hispanic origin, gender, and age for three five-year periods between 1980 and 1995.

The data from Chapter 4 reflects great consistency in the migration patterns between the 1980 to 1985 and 1985 to 1990 periods, but much higher shares of young persons in the 1990 to 1995 period. It shows roughly the same distribution of net migration between males and females overall, but significant variations in some race groups. For example, the net migration of Black males has been higher and younger than that of Black females. Hispanic migration has increasingly grown and changed dramatically since the 1980-85 period. Whereas the working age males previously propelled Hispanic migration, since 1985 the entire Hispanic family has been arriving at high levels. Finally, migration among the retired population seems to be almost exclusively White, save a significant share of Asian retirees attracted to the area.

Chapter 5 presents education and labor force data to complement the demographic analysis. Data concerning the educational attainment of the gender and race cohorts presents interesting insight into the nature of the population. Likewise, labor force data by age, race, and gender derived from the 1980 and 1990 Censuses depicts certain characteristics of the population in Maricopa County. This chapter includes national ten-year labor force participation growth projections from the Bureau of Labor Statistics, as well as a comparison of national and local labor force characteristics.

The period from 1980 through 1990 showed increased labor force participation of women in all race categories in Maricopa County. Male and female unemployment rates vary depending on race and year. Educational attainment show improved education levels of the population across all races from 1980 through 1990. It also indicates some interesting trends about the education levels of Asians and Hispanics, suggesting a significant presence of respondents who were likely educated abroad. It will be interesting to compare the data in this chapter with the 2000 Census data concerning education and labor force to measure the dynamic changes over this period. Many factors including possible increased migration from third world countries, lower national dropout rates, and an improved economy will undoubtedly have affected all race and sex cohorts.

2.0 HISTORIC TRENDS

The purpose of this chapter is to transmit and highlight key findings of the historic data collected to support the demographic trends analysis. It includes demographic detail on the age, ethnicity, and gender of the population in Maricopa County from 1980 through 2000. Data from the 2000 Census will not be as complete as data from the other census years, since only preliminary figures have been released.

2.1 TOTAL POPULATION

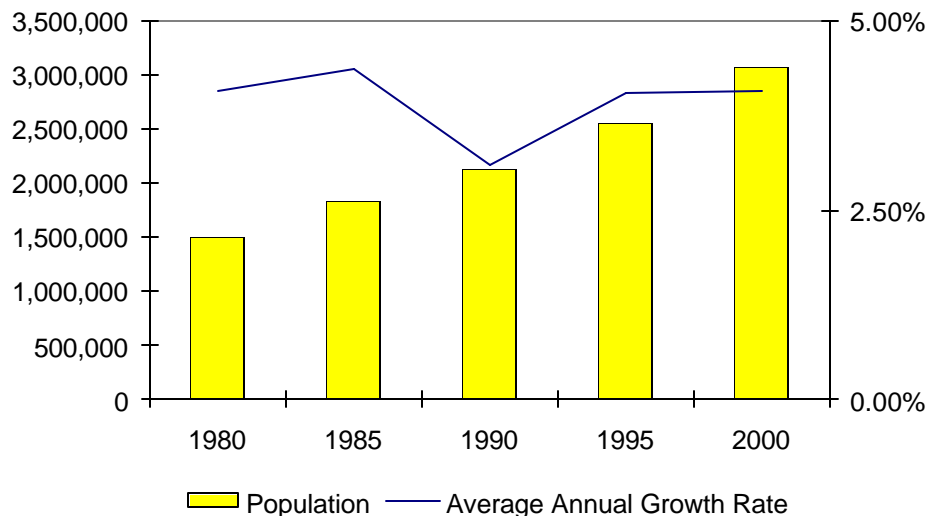
The population in Maricopa County experienced tremendous growth through the 1980's and 1990's. In 1980, the number of residents totaled little over 1.5 million, as seen in **Figures 2-1 and 2-2**. By the year 2000, that number had almost doubled to just over 3 million inhabitants. Average annual growth rates were high during this time period, ranging from 3.09 to 4.36 percent implying a rapidly expanding base which makes the growth rates that much more impressive. The five-year absolute population increases of approximately 329,000, 284,000, 430,000, and 520,000 in each respective period, place Phoenix growth among the top-tier for all large metropolitan areas.

**FIGURE 2-1
TOTAL POPULATION
MARICOPA COUNTY**

Year	Female	Male	Total	Average Annual Growth Rate
1980	769,261	739,791	1,509,052	
1985	926,149	911,807	1,837,956	4.36%
1990	1,077,866	1,044,235	2,122,101	3.09%
1995	1,270,191	1,281,574	2,551,765	4.05%
2000	1,535,676	1,536,473	3,072,149	4.08%

Source: Bureau of the Census, 1980, 1985, 1990, 1995, 2000.

**FIGURE 2-2
TOTAL POPULATION AND GROWTH RATE
MARICOPA COUNTY**



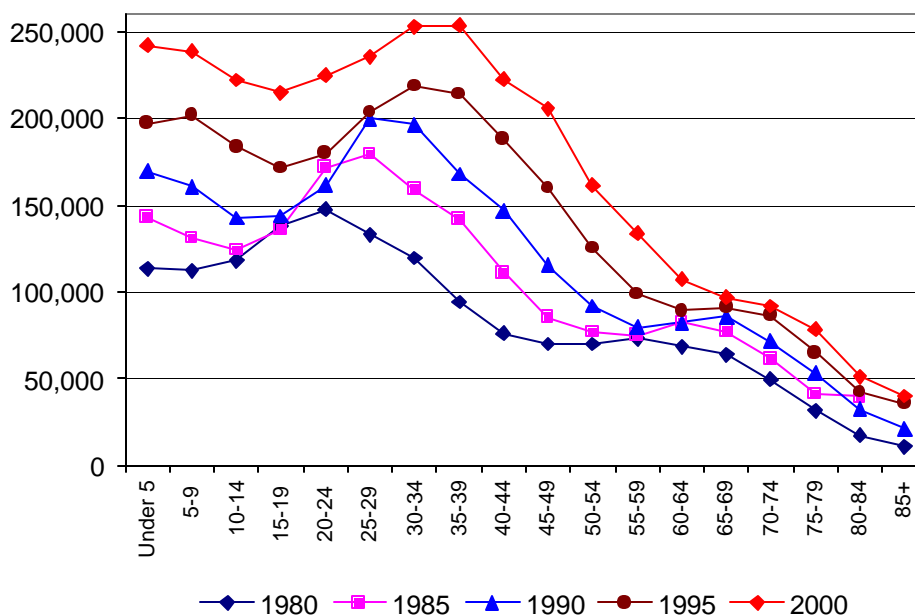
Source: Bureau of the Census, 1980, 1985, 1990, 1995, 2000.

This considerable population growth took place in most all age/sex/race cohorts. The remainder of this chapter details specific demographic details of the population from 1980 through 1995. Factors such as age, race and Hispanic origin, and gender provide insight into the nature of the inhabitants of Maricopa County throughout this period of substantial growth.

2.2 AGE COMPOSITION

Phoenix has generally had a reputation of being a prime location for retirees from all parts of the United States because of its mild winters and low humidity. However, the retirees are by no means the largest age cohorts in Maricopa County and the composition of the population in terms of age has fluctuated considerably since 1980. **Figure 23** shows the overall population in Maricopa County by age cohort in each census year. While growth has occurred in each age cohort, the baby boom population has shifted the peak of the age curve to the right over time, despite which median age has declined due to a steady flow of young arrivals. Note the age distribution for 2000 is not exact for all cohorts. The early 2000 Census release reports give ten-year age cohorts, instead of five-year age groups. Therefore, those larger cohorts are split according to the 1995 proportions, which may not reveal the true growth of each age group.

FIGURE 2-3
POPULATION BY AGE COHORT
MARICOPA COUNTY

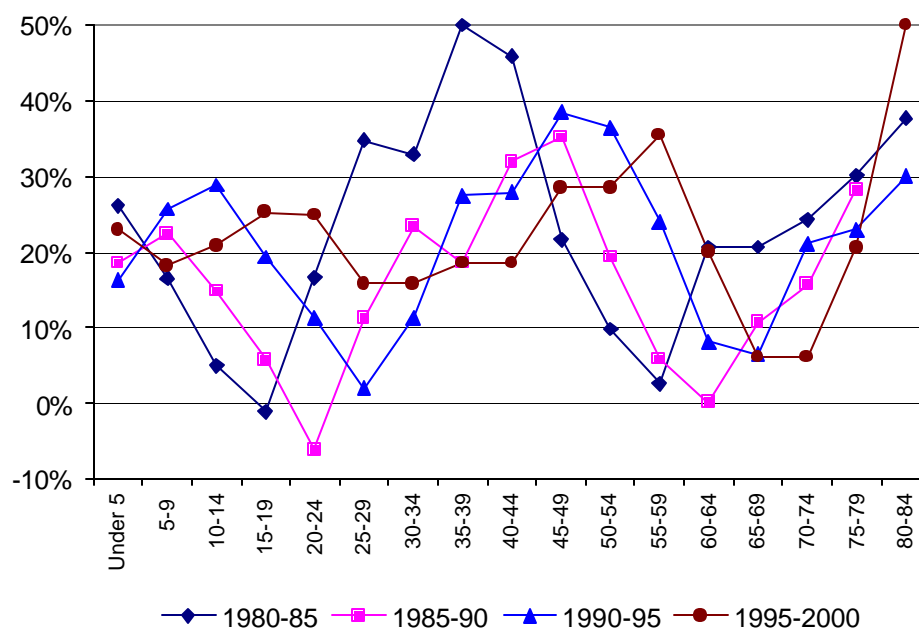


Sources: U.S. Bureau of the Census, 1980, 1985, 1990, 1995, 2000; Applied Economics, 2001.

The upward shift denotes the total increase in population, however, certain age groups increased more than others. From 1980 to 1990, the working age population from ages 25 through 54 increased at a higher rate, suggesting Maricopa County grew mostly in the working age population, and least in older age cohorts. In 1980, the most populous age cohort was the 20-24 age group, whereas in 1995 the 30-34 age cohort was the largest. Since 1985, there is a downward trend from the under 5 population through the adolescent years, picking back up with the young the working age population.

An examination of the five-year growth rates by age cohort in Maricopa County reflects interesting trends in population growth by age (**Figure 2-4**). Overall, the cohorts that grew the fastest over the twenty-year time period were the 40-49 year olds and the over 85 population. The cohorts that grew the slowest were the 20-24 year olds and, surprisingly, the 65-69 year olds. From 1980 through 1985 the age cohorts that grew most rapidly were working age, from ages 20 through 49. Through 1995, the working age cohorts continued to grow, but they also aged. For example, the 45-49 age cohort grew the fastest between 1990-95 and the 55-59 age cohort also showed impressive growth, reflecting the aging nature of the working class population. There has also been mixed gain in the growth of the youth population. Growth of children under age 10 was more or less stable from 1980 through 2000, with average annual growth rates between 3.2 and 5.2 percent. This is not the case with the teenage cohorts whose five-year growth rates have varied from just negative to a 29 percent increase.

FIGURE 2-4
POPULATION GROWTH BY AGE
MARICOPA COUNTY



Sources: U.S. Bureau of the Census, 1980, 1985, 1990, 1995, 2000; Applied Economics, 2001.

2.3 RACE AND HISPANIC ORIGIN OF THE POPULATION

Perhaps even more interesting than the overall growth of the population by age, are the changes in the racial and ethnic composition of the population. In general, growth was observed across all the minority groups, with the largest increase observed in the Hispanic population. Please note that in the Census, Hispanics are considered an ethnic group, not a race. Therefore, persons of Hispanic origin belong to all five racial categories, with the majority classified as White or Other. Figure 2-5 shows the population distribution by race and Hispanic origin during the five census years.

FIGURE 2-5
POPULATION BY RACE AND HISPANIC ORIGIN
MARICOPA COUNTY

Year	White	Black	American Indian	Asian	Other	Hispanic*	Total
1980	1,307,455	48,113	22,903	13,119	117,462	199,003	1,509,052
1985	1,583,722	58,404	25,658	23,996	146,176	242,773	1,837,956
1990	1,801,570	74,295	38,309	35,208	172,719	340,117	2,122,101
1995	2,153,447	93,358	45,843	51,231	207,886	522,487	2,551,765
2000	2,442,448	118,770	59,138	73,068	378,725	763,341	3,072,149

Sources: Census of the Bureau, 1980, 1985, 1990, 1995, 2000; Applied Economics, 2001.

* Hispanic persons are included in all races.

While each race group gained population in every Census, some grew at much higher rates. **Figure 2-6** shows the five-year growth rates experienced by each race and ethnicity cohort. During each time period, the White population grew below the overall rate for the county, while the minority groups have increased. The Black population shows a steady increase over the 20-year time period, while growth in the American Indian has been more sporadic ranging from 12 to 49 percent in each five-year period. The latter saw its strongest population growth from 1985 to 1990, perhaps because of a statewide trend of Native Americans returning to the reservations due to increased opportunities created by the gaming industry. The Asian population grew 83 percent from 1980-1985, almost doubling the population in five years, and continues to grow at rates well above the county average.

FIGURE 2-6
POPULATION GROWTH BY RACE AND HISPANIC ORIGIN
MARICOPA COUNTY

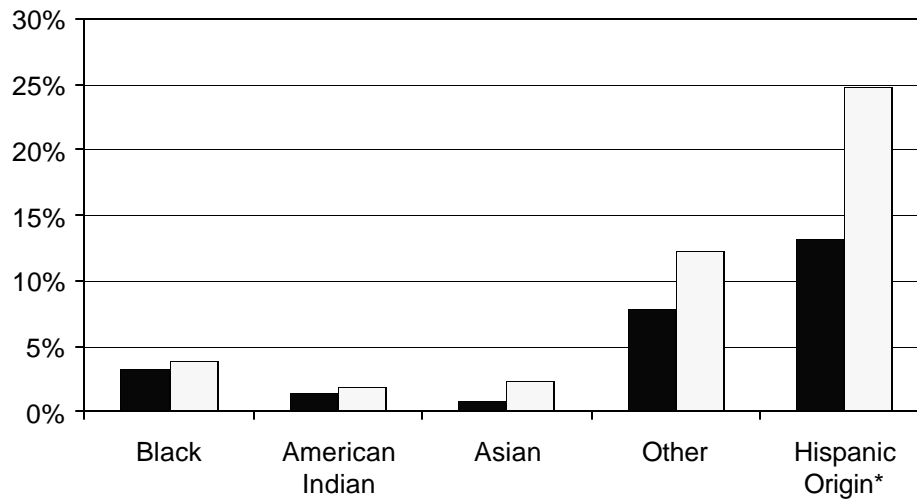
Year	White	Black	American Indian	Asian	Other	Hispanic*	Total
1980-1985	21%	21%	12%	83%	24%	22%	22%
1985-1990	14%	27%	49%	47%	18%	40%	15%
1990-1995	20%	26%	20%	46%	20%	54%	20%
1995-2000	13%	27%	29%	43%	82%	46%	20%

Sources: Census of the Bureau, 1980, 1985, 1990, 1995, 2000; Applied Economics, 2001.

* Hispanic persons are included in all races.

While the minority population has grown quickly since 1980, in absolute terms the increases in Other Race and Hispanics are probably more significant in altering the racial composition of the population (Figures 2-7 and 2-8). The White share of the population dropped from 87 to 80 percent of the total while Other, Black, and Asian races absorbed the majority of the seven percent decrease. The Other racial group grew the most, likely reflecting the influx of the Hispanic respondents, who often times do not classify themselves into one of the other four defined race categories used in the Census.

FIGURE 2-7
POPULATION COMPOSITION BY RACE AND HISPANIC ORIGIN
MARICOPA COUNTY, 1980, 2000



Sources: U.S. Bureau of the Census, 1980, 1985, 1990, 1995, 2000; Applied Economics, 2001.

Arguably the most prominent change in the ethnic composition of Maricopa County has been the increase in the Hispanic population, jumping from about 13 percent of the population in 1980 to just under 25 percent in twenty years. Most Hispanics in Maricopa County generally classify themselves as the White or Other race. In the 2000 Census about 14 percent of the White population included Hispanics, thus the 2000 non-Hispanic White population is not 80 percent, but likely around two-thirds of the population. Since Hispanics are considered an ethnic minority, the total minority population in Maricopa County may be larger than the data indicates.

FIGURE 2-8
RACE AS PERCENTAGE OF TOTAL
MARICOPA COUNTY

	White	Black	American Indian	Asian	Other	Hispanic Origin*
1980	86.6%	3.19%	1.52%	0.87%	7.78%	13.19%
1985	86.2%	3.18%	1.40%	1.31%	7.95%	13.21%
1990	84.9%	3.50%	1.81%	1.66%	8.14%	16.03%
1995	84.4%	3.66%	1.80%	2.01%	8.15%	20.48%
2000	79.5%	3.87%	1.92%	2.38%	12.33%	24.85%

Sources: U.S. Bureau of the Census, 1980, 1985, 1990, 1995, 2000; Applied Economics, 2001.

* Hispanic persons are included in all races.

It should be noted that a substantial portion of the increase in the Other population might be the result of new trends in race classification, in addition to population growth. This is becoming more of an issue nationwide as the multi-racial population grows. Someone with mixed racial heritage may not consider himself a member of one exclusive race. The Bureau of the Census accounted for this new trend with a changed questionnaire for the 2000 Census, which for the first time allowed respondents to classify themselves into more than one race category. In preliminary surveys, the Bureau found that less than two percent of the respondents marked more than one race.

The results of the 2000 Census show 2.4 percent of the nation and 3.0 percent in Maricopa County checked more than one race. This share is likely to increase overtime reflecting the less homogenous nature of the population of the United States. The data from the 2000 Census presented in this analysis reflects the distribution of the "two race" population across the five established categories in order to make comparisons across time.

Adjustments to the raw Census data were also made in order to account for irregularities encountered. The data from the special censuses in 1985 and 1995 proved to be inconsistent across two race categories, White and Other. The total population classified in the Other race category in 1985 was significantly lower than 1980 and 1990 levels. Likewise, the 1995 Census recorded a much higher female Other race population. Although the Other race category has experienced important growth, the anomalies are likely the result of different survey methods used during in the special censuses of Maricopa County. This trend had a direct effect on the reported White population in both 1985 and 1995, therefore adjustments were made to the data in these two racial categories for those years in order to reflect distributions similar to those in 1980 and 1990.

2.4 *POPULATION BY RACE, GENDER, AND AGE*

This section examines the detailed composition of the population by age, sex, and race and Hispanic origin from 1980 through 2000. **Figures 2-9** through **2-12** provide the Census data for Maricopa County in 1980, 1985, 1990, and 1995, respectively. This section does not include data from the 2000 Census since this level of demographic detail has not yet been made available. Figures 1 through 14 in Appendix A depict the age distribution by five-year cohort for each race and sex category, as well as the overall male and female population.

In general, the flatter slope of the curve noted in the plots for the female population compared to the male denotes a longer life span. The fast increases in the working age population likely suggest increased migration to the area. The steeper, downward slopes in the American Indian and Black populations are indicative of shorter life spans, while some of the shifts in the other race groups may be the result of both shorter life spans as well as migratory movements. Note the distinct bell shape caused by the increase in the working age population of both male and female Asians beginning in 1985. Detailed age and race data of vitality and migration are presented in Chapters 3.0 and 4.0.

FIGURE 2-9
POPULATION BY RACE AND HISPANIC ORIGIN, GENDER, AND 5-YEAR AGE COHORT
MARICOPY COUNTY 1980

Race/Sex	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
White Fem	43,288	43,931	47,512	55,750	61,386	56,533	52,080	42,034	34,096	31,741	33,525	37,043	35,204	33,655	26,384	17,356	10,334	7,004	668,856
White Tot	88,848	90,156	97,150	113,532	124,081	113,407	104,030	83,170	67,419	62,746	63,899	68,322	64,626	60,853	47,410	30,252	16,879	10,675	1,307,455
White Mal	45,560	46,225	49,638	57,782	62,695	56,874	51,950	41,136	33,323	31,005	30,374	31,279	29,422	27,198	21,026	12,896	6,545	3,671	638,599
Black Fem	2,379	2,407	2,437	2,678	2,600	2,216	1,665	1,293	1,086	971	889	782	647	661	443	329	158	127	23,768
Black Tot	4,921	4,885	4,869	5,634	5,404	4,552	3,581	2,582	2,221	1,960	1,701	1,462	1,285	1,170	827	579	270	210	48,113
Black Mal	2,542	2,478	2,432	2,956	2,804	2,336	1,916	1,289	1,135	989	812	680	638	509	384	250	112	83	24,345
Am Indian Fem	1,325	1,216	1,332	1,600	1,482	1,096	885	715	541	431	337	286	196	193	119	63	102		11,919
Am Indian Tot	2,636	2,482	2,608	3,162	2,778	2,067	1,692	1,314	994	784	607	515	369	322	237	128	208		22,903
Am Indian Mal	1,311	1,266	1,276	1,562	1,296	971	807	599	453	353	270	229	173	129	118	65	106		10,984
Asian Fem	507	588	501	560	737	786	851	488	444	442	315	235	163	113	95	61	67		6,953
Asian Tot	980	1,152	1,036	1,193	1,472	1,414	1,498	899	777	743	529	427	296	241	215	130	117		13,119
Asian Mal	473	564	535	633	735	628	647	411	333	301	214	192	133	128	120	63	56		6,166
Other Fem	7,780	6,883	6,249	6,733	6,653	5,573	4,220	3,064	2,381	1,970	1,780	1,377	959	813	596	405	108	221	57,765
Other Tot	15,899	13,828	12,560	13,853	13,649	11,791	8,843	6,257	4,859	3,961	3,410	2,681	1,862	1,543	1,117	753	170	426	117,462
Other Mal	8,119	6,945	6,311	7,120	6,996	6,218	4,623	3,193	2,478	1,991	1,630	1,304	903	730	521	354	56	205	59,697
Hispanic* Fem	12,785	11,604	10,649	11,228	10,667	9,036	7,391	5,512	4,286	3,644	3,224	2,602	1,845	1,498	1,099	697	378	284	98,429
Hispanic* Tot	26,225	23,318	21,552	23,288	21,757	18,767	15,105	11,047	8,548	7,183	6,277	5,047	3,575	2,823	2,050	1,288	636	517	199,003
Hispanic* Mal	13,440	11,714	10,903	12,060	11,090	9,731	7,714	5,535	4,262	3,539	3,053	2,445	1,730	1,325	951	591	258	233	100,574
County Fem	55,279	55,025	58,031	67,321	72,858	66,204	59,701	47,594	38,548	35,555	36,846	39,723	37,169	35,435	27,637	18,214	10,769	7,352	769,261
County Tot	113,284	112,503	118,223	137,374	147,384	133,231	119,644	94,222	76,270	70,194	70,146	73,407	68,438	64,129	49,806	31,842	17,644	11,311	1,509,052
County Mal	58,005	57,478	60,192	70,053	74,526	67,027	59,943	46,628	37,722	34,639	33,300	33,684	31,269	28,694	22,169	13,628	6,875	3,959	739,791

Sources: U.S. Bureau of the Census, 1980; Applied Economics, 2001.

* Hispanic persons are included in all races.

FIGURE 2-10
POPULATION BY RACE AND HISPANIC ORIGIN, GENDER, AND 5-YEAR AGE COHORT
MARICOPY COUNTY 1985

Race/Sex	Under 5	5-9 yrs	10-14 yrs	15-19 yrs	20-24 yrs	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	TOTAL
White Fem	54,581	50,923	48,940	53,599	69,673	73,808	67,552	61,081	48,858	38,339	35,190	36,642	42,358	39,850	32,749	22,711	24,047	800,901
White Tot	111,863	104,362	100,043	110,850	142,653	150,752	136,651	123,376	98,654	76,437	69,603	69,593	77,666	73,828	59,261	39,651	38,479	1,583,722
White Mal	57,282	53,439	51,103	57,251	72,980	76,944	69,099	62,295	49,796	38,098	34,413	32,951	35,308	33,978	26,512	16,940	14,432	782,821
Black Fem	3,083	2,726	2,773	2,607	2,983	3,056	2,528	2,105	1,506	1,175	1,028	914	779	668	549	353	378	29,211
Black Tot	6,161	5,628	5,547	5,398	6,159	6,183	5,117	4,297	3,004	2,319	2,038	1,697	1,450	1,195	938	634	639	58,404
Black Mal	3,078	2,902	2,774	2,791	3,176	3,127	2,589	2,192	1,498	1,144	1,010	783	671	527	389	281	261	29,193
Am Indian Fem	1,664	1,384	1,251	1,532	1,736	1,408	1,100	821	646	462	340	263	214	129	124	73	68	13,215
Am Indian Tot	3,220	2,734	2,459	3,031	3,229	2,799	2,112	1,671	1,197	898	679	489	390	265	207	138	140	25,658
Am Indian Mal	1,556	1,350	1,208	1,499	1,493	1,391	1,012	850	551	436	339	226	176	136	83	65	72	12,443
Asian Fem	1,117	980	962	923	1,111	1,501	1,356	1,232	766	527	493	349	280	154	116	70	82	12,019
Asian Tot	2,251	1,992	1,981	2,082	2,513	2,990	2,675	2,211	1,456	1,025	881	593	505	309	246	146	140	23,996
Asian Mal	1,134	1,012	1,019	1,159	1,402	1,489	1,319	979	690	498	388	244	225	155	130	76	58	11,977
Other Fem	9,536	8,012	6,940	6,813	8,345	7,869	5,962	4,737	3,324	2,270	1,815	1,501	1,352	899	701	458	269	70,803
Other Tot	19,339	16,344	14,100	14,535	17,375	16,770	12,426	10,086	6,927	4,653	3,808	2,948	2,531	1,774	1,245	855	460	146,176
Other Mal	9,803	8,332	7,160	7,722	9,030	8,901	6,464	5,349	3,603	2,383	1,993	1,447	1,179	875	544	397	191	75,373
Hispanic* Fem	15,290	13,512	12,043	11,100	12,481	11,889	9,822	7,936	5,935	4,336	3,685	2,906	2,464	1,721	1,249	802	979	118,150
Hispanic* Tot	31,231	27,980	24,531	23,434	26,431	24,458	20,371	16,651	12,124	8,705	7,280	5,810	4,831	3,265	2,339	1,549	1,783	242,773
Hispanic* Mal	15,941	14,468	12,488	12,334	13,950	12,569	10,549	8,715	6,189	4,369	3,595	2,904	2,367	1,544	1,090	747	804	124,623
County Fem	69,981	64,025	60,866	65,474	83,848	87,642	78,498	69,976	55,100	42,773	38,866	39,669	44,983	41,700	34,239	23,665	24,844	926,149
County Tot	142,834	131,060	124,130	135,896	171,929	179,494	158,981	141,641	111,238	85,332	77,009	75,320	82,542	77,371	61,897	41,424	39,858	1,837,956
County Mal	72,853	67,035	63,264	70,422	88,081	91,852	80,483	71,665	56,138	42,559	38,143	35,651	37,559	35,671	27,658	17,759	15,014	911,807

Sources: U.S. Bureau of the Census, 1985; Applied Economics, 2001.

* Hispanic persons are included in all races.

FIGURE 2-11
POPULATION BY RACE AND HISPANIC ORIGIN, GENDER, AND 5-YEAR AGE COHORT
MARICOPY COUNTY 1990

Race/Sex	Under 5	5-9 yrs	10-14 yrs	15-19 yrs	20-24 yrs	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
White Fem	64,200	60,905	55,071	56,191	63,294	80,920	81,512	71,967	64,441	52,000	42,481	37,290	41,272	44,761	38,945	29,730	19,960	13,808	918,748
White Tot	131,248	125,489	112,873	115,002	129,816	164,313	165,148	143,057	128,637	102,383	82,206	72,383	76,398	81,153	68,604	50,940	31,586	20,334	1,801,570
White Mal	67,048	64,584	57,802	58,811	66,522	83,393	83,636	71,090	64,196	50,383	39,725	35,093	35,126	36,392	29,659	21,210	11,626	6,526	882,822
Black Fem	4,091	3,852	3,137	2,932	3,161	3,549	3,436	2,964	2,157	1,649	1,513	1,112	1,079	959	669	535	302	311	37,408
Black Tot	7,926	7,792	6,392	6,275	6,277	7,289	7,001	6,019	4,710	3,361	2,660	2,188	1,975	1,552	1,117	841	446	474	74,295
Black Mal	3,835	3,940	3,255	3,343	3,116	3,740	3,565	3,055	2,553	1,712	1,147	1,076	896	593	448	306	144	163	36,887
Am Indian Fem	2,425	1,932	1,924	1,761	2,208	2,520	1,993	1,438	1,043	738	635	478	332	273	126	145	86	80	20,137
Am Indian Tot	4,864	4,148	3,643	3,272	4,251	4,560	3,779	2,477	2,005	1,492	1,082	898	593	429	315	196	131	174	38,309
Am Indian Mal	2,439	2,216	1,719	1,511	2,043	2,040	1,786	1,039	962	754	447	420	261	156	189	51	45	94	18,172
Asian Fem	1,532	1,341	1,130	1,243	1,500	1,924	2,159	1,945	1,387	1,220	713	559	430	366	213	117	61	40	17,880
Asian Tot	3,180	2,669	2,435	2,915	3,436	3,786	4,113	3,563	2,476	2,076	1,357	924	841	675	320	219	131	92	35,208
Asian Mal	1,648	1,328	1,305	1,672	1,936	1,862	1,954	1,618	1,089	856	644	365	411	309	107	102	70	52	17,328
Other Fem	10,968	9,734	8,381	7,530	8,471	9,375	7,876	5,988	4,319	2,971	2,142	1,688	1,533	954	791	511	240	221	83,693
Other Tot	22,087	20,291	17,245	16,243	17,678	19,608	16,163	12,740	8,918	6,067	4,611	3,327	2,820	1,861	1,280	925	450	405	172,719
Other Mal	11,119	10,557	8,864	8,713	9,207	10,233	8,287	6,752	4,599	3,096	2,469	1,639	1,287	907	489	414	210	184	89,026
Hispanic* Fem	21,643	18,137	16,440	15,444	16,053	17,272	14,630	11,671	9,111	6,556	4,728	3,886	3,539	2,607	1,975	1,240	653	491	166,076
Hispanic* Tot	43,246	38,822	33,527	32,030	34,180	36,143	30,014	24,220	18,752	12,908	9,796	7,493	6,738	4,806	3,277	2,173	1,152	840	340,117
Hispanic* Mal	21,603	20,685	17,087	16,586	18,127	18,871	15,384	12,549	9,641	6,352	5,068	3,607	3,199	2,199	1,302	933	499	349	174,041
County Fem	83,216	77,764	69,643	69,657	78,634	98,288	96,976	84,302	73,347	58,578	47,484	41,127	44,646	47,313	40,744	31,038	20,649	14,460	1,077,866
County Tot	169,305	160,389	142,588	143,707	161,458	199,556	196,204	167,856	146,746	115,379	91,916	79,720	82,627	85,670	71,636	53,121	32,744	21,479	2,122,101
County Mal	86,089	82,625	72,945	74,050	82,824	101,268	99,228	83,554	73,399	56,801	44,432	38,593	37,981	38,357	30,892	22,083	12,095	7,019	1,044,235

Sources: U.S. Bureau of the Census, 1990; Applied Economics, 2001.

* Hispanic persons are included in all races.

FIGURE 2-12
POPULATION BY RACE AND HISPANIC ORIGIN, GENDER, AND 5-YEAR AGE COHORT
MARICOPY COUNTY 1995

Race/Sex	Under 5	5-9 yrs	10-14 yrs	15-19 yrs	20-24 yrs	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
White Fem	70,095	71,929	66,917	62,439	67,964	80,635	91,391	92,193	82,864	72,064	57,230	45,875	42,625	46,015	45,772	35,339	24,451	21,727	1,077,525
White Tot	151,886	157,957	146,882	136,523	141,587	165,180	182,063	181,565	162,058	140,689	111,945	88,968	81,576	85,181	82,339	62,480	40,769	33,799	2,153,447
White Mal	81,791	86,028	79,965	74,084	73,623	84,545	90,672	89,372	79,194	68,625	54,715	43,093	38,951	39,166	36,567	27,141	16,318	12,072	1,075,922
Black Fem	4,466	4,490	3,925	3,510	3,499	3,871	4,099	4,094	3,235	2,398	1,724	1,371	1,161	1,021	759	544	364	430	44,961
Black Tot	9,327	9,745	8,468	7,847	7,292	7,962	8,377	8,290	6,740	5,018	3,563	2,821	2,352	1,868	1,383	955	610	740	93,358
Black Mal	4,861	5,255	4,543	4,337	3,793	4,091	4,278	4,196	3,505	2,620	1,839	1,450	1,191	847	624	411	246	310	48,397
Am Indian Fem	2,452	2,524	2,087	2,010	2,363	2,215	2,334	1,949	1,380	1,097	776	564	404	278	254	145	106	151	23,089
Am Indian Tot	5,079	5,305	4,392	4,096	4,619	4,381	4,332	3,699	2,657	2,122	1,498	1,096	784	561	446	283	203	290	45,843
Am Indian Mal	2,627	2,781	2,305	2,086	2,256	2,166	1,998	1,750	1,277	1,025	722	532	380	283	192	138	97	139	22,754
Asian Fem	1,916	1,899	1,727	1,679	2,425	2,562	2,725	2,624	2,349	1,879	1,220	863	720	535	374	225	126	142	25,990
Asian Tot	4,160	4,079	3,774	3,781	5,110	5,175	5,058	4,813	4,232	3,309	2,304	1,590	1,292	929	684	410	248	283	51,231
Asian Mal	2,244	2,180	2,047	2,102	2,685	2,613	2,333	2,189	1,883	1,430	1,084	727	572	394	310	185	122	141	25,241
Other Fem	12,424	11,458	9,414	8,746	9,895	9,752	8,854	7,585	5,760	4,130	2,950	2,092	1,732	1,367	963	620	417	467	98,626
Other Tot	26,345	24,461	20,213	19,196	21,113	20,728	18,503	15,566	11,987	8,599	6,097	4,330	3,375	2,662	1,893	1,151	743	924	207,886
Other Mal	13,921	13,003	10,799	10,450	11,218	10,976	9,649	7,981	6,227	4,469	3,147	2,238	1,643	1,295	930	531	326	457	109,260
Hispanic* Fem	31,522	29,105	23,898	22,101	24,496	24,249	22,550	19,098	14,549	10,536	7,749	5,464	4,493	3,645	2,639	1,737	1,128	1,304	250,263
Hispanic* Tot	66,438	61,511	50,670	48,369	52,006	51,441	46,614	38,853	29,822	21,628	15,653	11,043	8,675	7,043	5,066	3,146	1,968	2,541	522,487
Hispanic* Mal	34,916	32,406	26,772	26,268	27,510	27,192	24,064	19,755	15,273	11,092	7,904	5,579	4,182	3,398	2,427	1,409	840	1,237	272,224
County Fem	91,353	92,300	84,070	78,384	86,146	99,035	109,403	108,445	95,588	81,568	63,900	50,765	46,642	49,216	48,122	36,873	25,464	22,917	1,270,191
County Tot	196,797	201,547	183,729	171,443	179,721	203,426	218,333	213,933	187,674	159,737	125,407	98,805	89,379	91,201	86,745	65,279	42,573	36,036	2,551,765
County Mal	105,444	109,247	99,659	93,059	93,575	104,391	108,930	105,488	92,086	78,169	61,507	48,040	42,737	41,985	38,623	28,406	17,109	13,119	1,281,574

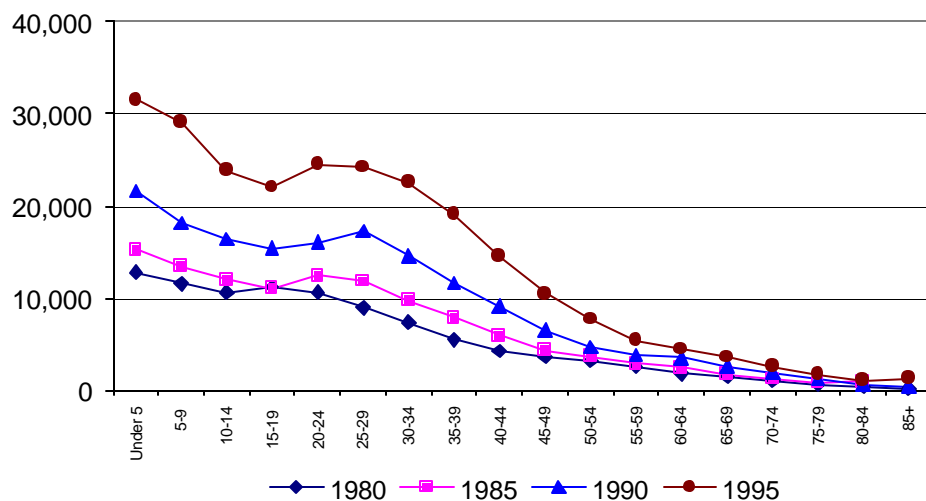
Sources: U.S. Bureau of the Census, 1995; Applied Economics, 2001.

* Hispanic persons are included in all races.

The dynamic growth of the Hispanic population in Maricopa County warrants special attention. The age distribution of the male and female population over this period shows a much larger presence of the younger age population than the elderly. **Figures 2-13** and **2-14** below show female and male Hispanic population distribution by age. Since 1985 there has been a sizeable increase in the youth and adolescent population. Likewise the female and male trend lines are very similar. These factors suggest considerable growth in the Hispanic family, not just the working age males as in the past. At the same time, the population over age 55 grew the least over this time period. **Figure 2-15** shows the average Hispanic male and female share of the total population, and indicates the younger cohorts have composed a much larger presence than older Hispanics, both male and female.

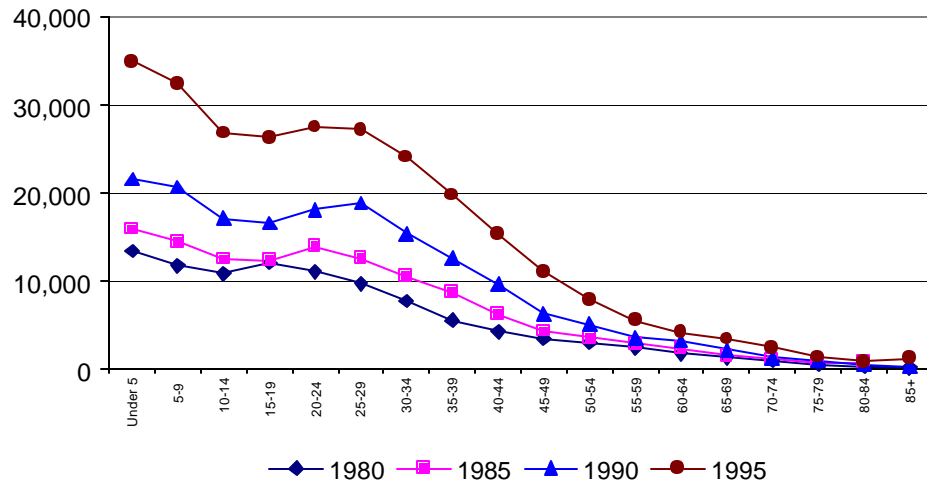
This could be the result of many factors indicative of the Hispanic population. The decline in the curve at the older population suggests that the Hispanic population does not remain in the Valley past the prime working ages. The small amount of elderly is likely a small sector of the Hispanic population that has long resided in Maricopa County. On the contrary, the large percentage of working age population indicates the migration tendencies of the young Hispanic men and women to the area. The large surge in the young Hispanic population, both youth and working age, suggests that this growth could be longer term. As these younger cohorts that grow up in the area age, they are more likely to stay, thus accelerating even more the Hispanic growth. The result could be upward curve shifts (reflecting population growth), and a gradual curve shift to the right as the Hispanic population stays in Maricopa County and ages.

FIGURE 2-13
HISPANIC FEMALE POPULATION
MARICOPA COUNTY



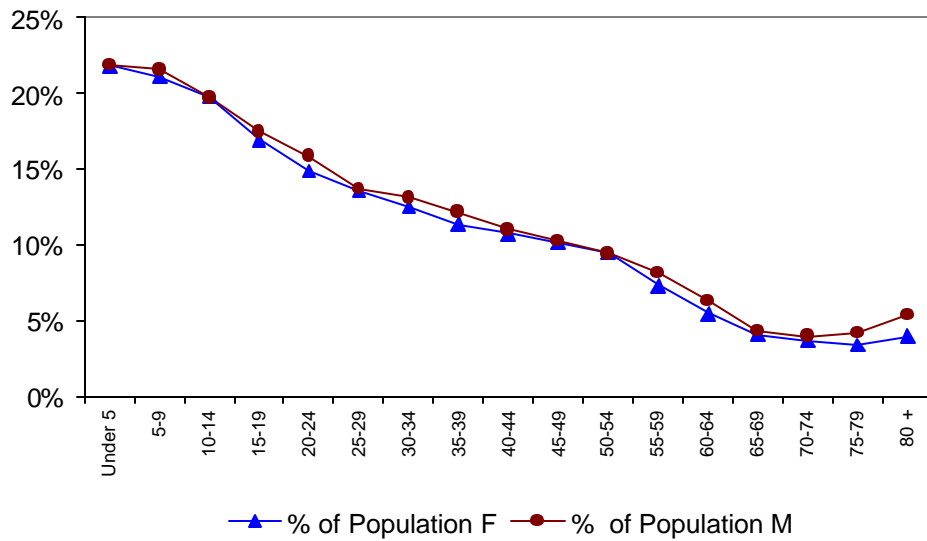
Source: U.S. Bureau of the Census, 1980, 1985, 1990, 1995.

**FIGURE 2-14
HISPANIC MALE POPULATION
MARICOPA COUNTY**



Source: U.S. Bureau of the Census, 1980, 1985, 1990, 1995.

**FIGURE 2-15
AVERAGE HISPANIC MALE AND FEMALE SHARE OF POPULATION
MARICOPA COUNTY**



Source: U.S. Bureau of the Census, 1980, 1985, 1990, 1995.

3.0 VITAL STATISTICS

This chapter examines Maricopa County vital statistics, births and deaths, collected in conjunction with the Census years. Vital statistics presented here are used to determine the natural rate of population growth in the County. When compared to the Census data, vital statistics can provide insight into the specific demographic composition of the population migrating to the area during specific time periods.

3.1 BIRTHS

Birth data was collected from the Arizona Department of Health Services' annual vital statistics report. The number of births in Maricopa County was classified by mother's age at the time of birth, gender of the baby, and finally race and Hispanic origin of the mother. The data was collected for a three-year period surrounding each census and then averaged. For example 1979, 1980, 1981 data were averaged for the 1980 census year. This is necessary in order smooth out irregularities caused by small age/race groups. The scope of this study does not include health of the mother or baby, and any references to births can be implied as live births. These births would then be applied to the female population data by age to calculate births and birthrates. **Figures 3-1 and 3-2** show the actual raw data as provided in the ADHS vital statistics report.

At first glance, it is clear that there is a high level of inconsistencies in the data. Over the seventeen-year time period many criteria and reporting techniques have changed within the Arizona Department of Health Services. Therefore, a small description of the data presented here is in order.

Prior to 1980, there was no data available on Hispanic births. From 1979 through 1985, "Other" did not exist as a race category. During the late 1980's and early 1990's, the ADHS began to report Other as a race category, but did not report Asian births in a separate race category. It is likely that most Asian births were categorized into the Other category during these years. In addition, there appears to be inconsistencies in the way ADHS has reported Hispanic births for some years. The ADHS reports that only 3.3 percent of all Hispanics are non-White¹, and therefore in some early years it appears that all Hispanic births were included in the White race.

Prior to 1989, the ADHS followed the national standards for reporting birth data, listing the race and ethnicity of the **child**. Realizing the importance of pre-natal care and the possible health trends among the races, in 1989 ethnicity and race were reported according to that of the **mother**. While the vast majority of babies have the same ethnicity of their mothers, the data are not completely consistent over time.

Finally, race for vital statistics is reported using different methods than those of the Census. For medical statistical purposes, race and ethnicity of an individual are determined at birth according to race of the parents using standard classifications established by the National Center for Health Statistics. Parents' race and ethnicity is determined from their own birth certificate. In contrast, the Census relies on individuals to self-identify their race and ethnicity, regardless of the designation on the birth certificate. Typically one's race will not change, but as the population becomes more bi and multi-racial, this may cause a larger divergence than at present.

All these factors created too many inconsistencies in the raw birth data to be able to apply it directly to the Census data for modeling purposes. Furthermore, the birth data was not provided in the by race, sex, and age, but rather by race and sex, and by age. However, it did offer a starting point for the analysis.

¹ Arizona Department of Health Services, [Arizona Health Status and Vital Statistics Report](#), "Definitions", 1991, p. 432.

FIGURE 3-1
BIRTHS BY RACE, HISPANIC ORIGIN, AND BABY'S GENDER
MARICOPA COUNTY

Year	White		Black		AI		Asian		Other		Hispanic*		County Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
1979	11,849	10,924	661	619	348	313	133	153	na	na	na	na	12,991	12,009
1980	12,449	11,868	706	666	376	369	166	169	na	na	3,252	3,141	13,697	13,072
1981	13,021	12,213	724	685	353	383	199	222	na	na	3,464	3,286	14,297	13,503
1984	14,265	13,452	830	806	447	412	266	233	na	na	3,631	3,401	15,808	14,903
1985	15,589	14,892	793	865	500	503	340	298	na	na	4,017	3,834	17,222	16,558
1986	16,360	15,674	930	866	483	490	266	260	5	0	4,592	4,648	18,044	17,290
1989	18,222	17,217	921	903	589	623	na	na	373	331	4,932	4,609	20,105	19,074
1990	18,799	17,908	953	932	581	608	na	na	302	331	5,363	5,296	20,635	19,779
1991	18,516	17,639	944	923	595	623	na	na	318	349	5,577	5,507	20,374	19,533
1994	19,678	18,836	898	874	533	579	457	411	22	25	6,991	6,671	21,588	20,725
1995	20,645	19,756	815	812	553	523	472	395	26	23	7,589	7,318	22,511	21,509
1996	21,644	20,895	815	862	625	597	530	499	27	35	8,585	8,390	23,641	22,888

Source: Arizona Department of Health Services, Arizona Health Status and Vital Statistics, 1980-1996.

* Hispanic persons are included in all races.

FIGURE 3-2
BIRTHS BY AGE OF MOTHER AT TIME OF BIRTH
MARICOPA COUNTY

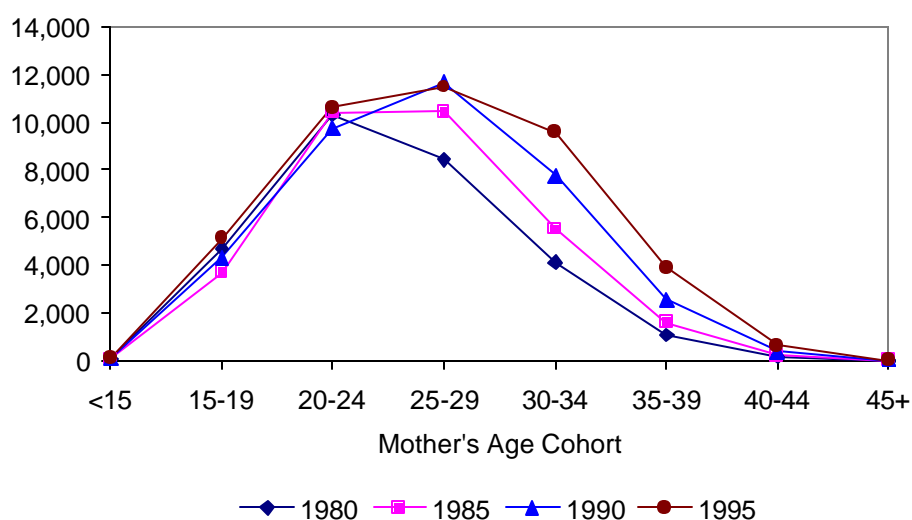
Year	Mother's Age								Not	
	<15	15-19	20-24	25-29	30-34	35-39	40-44	45+	Stated	Total
1979	68	4,223	8,841	7,257	3,513	912	172	10	4	25,000
1980	75	4,361	9,540	7,810	3,824	1,003	147	6	3	26,769
1981	66	4,212	9,880	8,128	4,198	1,146	159	8	3	27,800
1984	67	4,075	10,428	9,457	5,008	1,461	209	6	0	30,711
1985	61	4,352	11,182	10,557	5,686	1,702	225	5	10	33,780
1986	86	4,632	11,168	11,198	6,106	1,889	247	7	1	35,334
1989	97	5,169	11,062	12,445	7,619	2,380	379	16	12	39,179
1990	119	5,339	11,036	12,610	8,137	2,745	409	11	8	40,414
1991	111	5,538	11,281	11,725	8,074	2,722	429	17	10	39,907
1994	149	6,023	11,504	11,393	9,181	3,464	573	20	6	42,313
1995	142	6,202	12,018	11,879	9,328	3,791	633	24	3	44,020
1996	135	6,489	12,667	12,723	9,683	4,093	709	27	3	46,529

Source: Arizona Department of Health Services, Arizona Health Status and Vital Statistics, 1980-1996.

In order to create a set of birth data suitable for the model, several data sets were collected to provide the framework. The first includes a cross-tab table of mother's age and race at the state level. Since Maricopa County is a major subset of the state data, the distribution of mother's age according to race was applied to the raw data for the needed years. For the years where Asian births were missing, the data from Other was used and often a countywide birthrate by mother's age was used for other racial groups. Finally, a reduction was made in the amount of White births during many years because of anomalies among birthrates and age-cohorts for most census years. This may also be the result of women who give birth in Maricopa County but reside elsewhere.

Figure 3-3 below shows the overall births by mother's age cohort during the census years. As the figure indicates, *there is very little growth in the number of births by mothers under 20 years of age. However, there is marked growth in births by women in older age groups, especially the 30-34 cohort.*

**FIGURE 3-3
TOTAL BIRTHS
MARICOPA COUNTY**



Sources: Arizona Department of Health Services, Arizona Health Status and Vital Statistics, 1979-1996; Applied Economics, 2001.

Figures 3-4 through 3-7 show the adjusted data used in the migration analysis. The tables provide births by mother's age and race or Hispanic origin, and the baby's gender for 1980, 1985, 1990, and 1995. As the data shows, the overall births increased greatly over the fifteen-year time period with population growth and ethnic shifts.

FIGURE 3-4
BIRTHS BY RACE, MOTHER'S AGE, AND BABY'S GENDER
MARICOPA COUNTY, 1980

Race	Sex	Mother's Age at Time of Birth								Total
		<15	15-19	20-24	25-29	30-34	35-39	40-44	45+	
White	F	23	1,811	4,141	3,451	1,723	449	66	4	11,667
	T	48	3,741	8,556	7,131	3,559	928	136	7	24,106
	M	25	1,930	4,415	3,679	1,836	479	70	4	12,439
Black	F	8	170	254	151	54	14	4	0	657
	T	17	351	524	311	112	29	9	0	1,354
	M	9	181	270	160	58	15	5	0	697
American Indian	F	2	78	123	83	43	21	6	0	355
Asian	T	4	156	247	167	86	41	12	1	714
	M	2	79	124	84	43	21	6	0	359
Other	F	1	8	49	64	46	12	1	0	182
	T	1	16	94	123	88	22	2	0	346
	M	0	8	45	59	42	10	1	0	165
Hispanic*	F	4	210	417	318	133	34	6	1	1,123
	T	10	447	897	697	295	71	13	2	2,432
	M	6	237	480	379	162	37	7	1	1,309
County	F	12	701	1,157	810	371	123	29	1	3,204
	T	25	1,435	2,367	1,658	760	253	60	4	6,563
	M	13	734	1,210	848	389	130	31	3	3,359

Source: Arizona Department of Health Services, Arizona Health Status and Vital Statistics, 1979, 1980,1981; Applied Economics, 2001.

* Hispanic persons are included in all races.

FIGURE 3-5
BIRTHS BY RACE, MOTHER'S AGE, AND BABY'S GENDER
MARICOPA COUNTY, 1985

Race	Sex	Mother's Age at Time of Birth								Total
		<15	15-19	20-24	25-29	30-34	35-39	40-44	45+	
White	F	17	1,300	4,077	4,285	2,224	625	71	1	12,600
	T	35	2,678	8,175	8,594	4,546	1,284	146	2	25,460
	M	18	1,378	4,098	4,309	2,322	659	75	1	12,860
Black	F	4	151	296	204	124	54	12	1	846
	T	8	304	594	409	249	108	24	1	1,697
	M	4	153	298	205	125	54	12	0	851
American Indian	F	3	99	179	116	50	20	1	0	469
Asian	T	7	200	362	234	98	41	3	0	945
	M	4	101	183	118	48	21	2	0	476
Other	F	1	10	54	103	73	20	3	0	265
	T	2	21	114	216	154	43	5	0	555
	M	1	11	60	113	81	23	2	0	291
Hispanic*	F	6	240	570	500	250	64	8	1	1,639
	T	11	490	1,168	1,002	484	128	18	2	3,303
	M	5	250	598	502	234	64	10	1	1,664
County	F	12	755	1,412	1,037	533	176	34	2	3,961
	T	24	1,533	2,867	2,105	1,083	357	68	4	8,041
	M	12	778	1,455	1,068	550	181	34	2	4,080

Source: Arizona Department of Health Services, Arizona Health Status and Vital Statistics, 1984, 1985, 1986; Applied Economics, 2001.

* Hispanic persons are included in all races.

FIGURE 3-6
BIRTHS BY RACE, MOTHER'S AGE, AND BABY'S GENDER
MARICOPA COUNTY, 1990

Race	Sex	Mother's Age at Time of Birth								Total
		<15	15-19	20-24	25-29	30-34	35-39	40-44	45+	
White	F	17	1,376	3,623	4,762	3,214	1,050	160	6	14,208
	T	35	2,849	7,476	9,803	6,612	2,160	329	12	29,276
	M	18	1,473	3,853	5,041	3,398	1,110	169	6	15,068
Black	F	6	226	281	225	137	39	5	0	919
	T	13	457	568	454	277	78	11	0	1,858
	M	7	231	287	229	140	39	6	0	939
American Indian	F	3	120	160	130	68	20	2	0	503
Asian	T	6	238	349	273	148	52	3	0	1,069
	M	3	118	189	143	80	32	1	0	566
Other	F	0	21	64	105	100	39	9	0	337
	T	0	42	126	207	197	76	18	0	667
	M	0	21	62	103	98	37	9	0	330
Hispanic*	F	10	372	604	463	267	91	16	1	1,824
	T	21	755	1,225	939	540	184	33	1	3,698
	M	11	383	621	476	273	93	17	1	1,873
County	F	37	1,314	2,099	1,543	841	281	47	3	6,162
	T	74	2,668	4,259	3,133	1,706	570	95	6	12,508
	M	37	1,354	2,160	1,590	865	289	48	3	6,346

Source: Arizona Department of Health Services, Arizona Health Status and Vital Statistics, 1989, 1990,1991; Applied Economics, 2001.

* Hispanic persons are included in all races.

FIGURE 3-7
BIRTHS BY RACE, MOTHER'S AGE, AND BABY'S GENDER
MARICOPA COUNTY, 1995

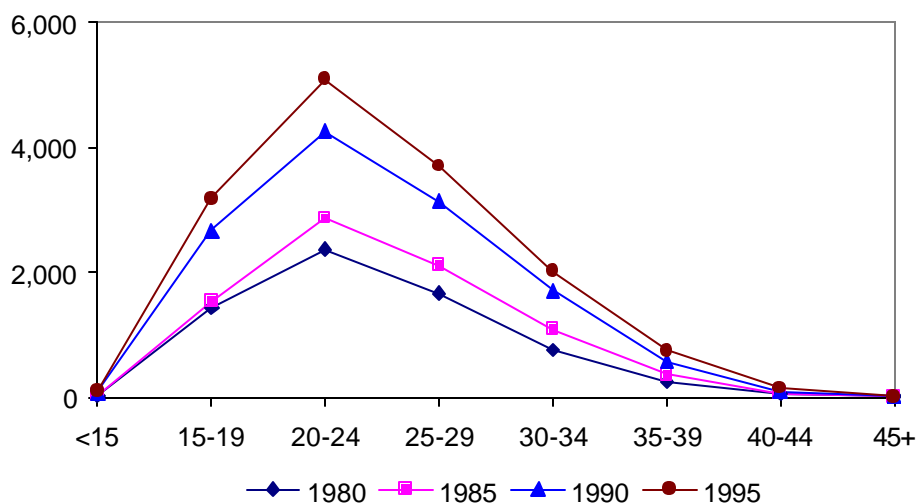
Race	Sex	Mother's Age at Time of Birth								Total
		<15	15-19	20-24	25-29	30-34	35-39	40-44	45+	
White	F	25	1,635	3,750	4,509	3,972	1,627	262	8	15,788
	T	51	3,354	7,690	9,239	8,135	3,332	537	16	32,354
	M	26	1,719	3,940	4,730	4,163	1,705	275	8	16,566
Black	F	4	203	304	209	144	63	11	0	938
	T	11	432	639	442	308	133	23	1	1,989
	M	7	229	335	233	164	70	12	1	1,051
American Indian	F	2	120	190	122	80	27	4	1	546
Asian	T	8	247	408	268	178	63	10	2	1,183
	M	6	127	218	146	98	36	6	1	637
Other	F	1	21	84	134	130	53	11	1	435
	T	2	47	184	292	285	115	23	2	951
	M	1	26	100	159	155	62	13	1	516
Hispanic*	F	15	520	834	608	331	124	24	1	2,457
	T	31	1,061	1,702	1,240	676	253	50	2	5,013
	M	16	541	868	632	345	129	25	1	2,556
County	F	45	1,557	2,495	1,815	990	368	72	3	7,345
	T	92	3,176	5,090	3,702	2,019	750	147	7	14,983
	M	47	1,619	2,595	1,887	1,029	382	75	4	7,638

Source: Arizona Department of Health Services, Arizona Health Status and Vital Statistics, 1994, 1995, 1996; Applied Economics, 2001.

* Hispanic persons are included in all races.

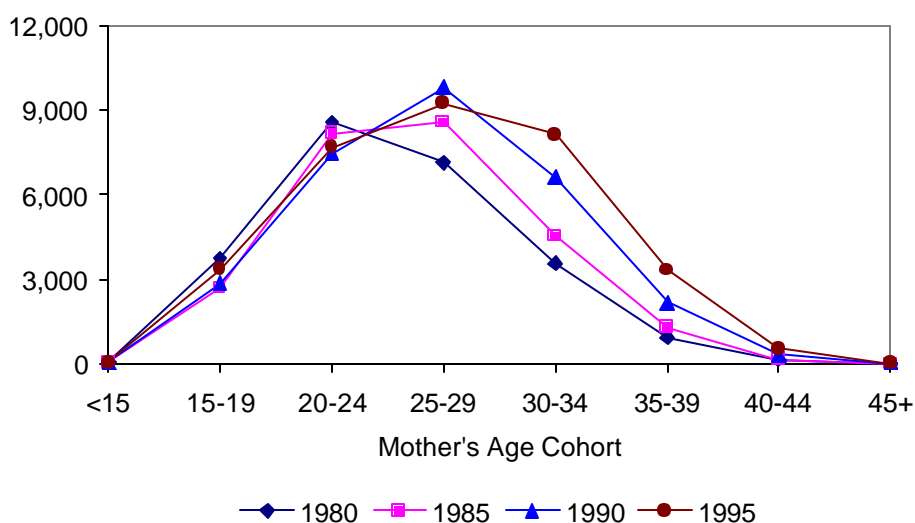
Again, because of the dynamic increase in the Hispanic population, birth data for this group is highlighted and shows unique trends. *In spite of the increased amount of Hispanic births, the distribution of mother's age changed little from 1980 through 1995 (Figure 3-8) unlike the overall (largely White) population.* The general Hispanic distribution across the ages did not change drastically over the fifteen years, with the 20-24 age cohort being the largest in each census year. This particular ethnic cohort did not undergo the same countywide trend of giving birth at an older age.

FIGURE 3-8
TOTAL HISPANIC BIRTHS
MARICOPA COUNTY



Sources: Arizona Department of Health Services, Arizona Health Status and Vital Statistics, 1979-1996; Applied Economics, 2001.

FIGURE 3-9
TOTAL WHITE BIRTHS
MARICOPA COUNTY

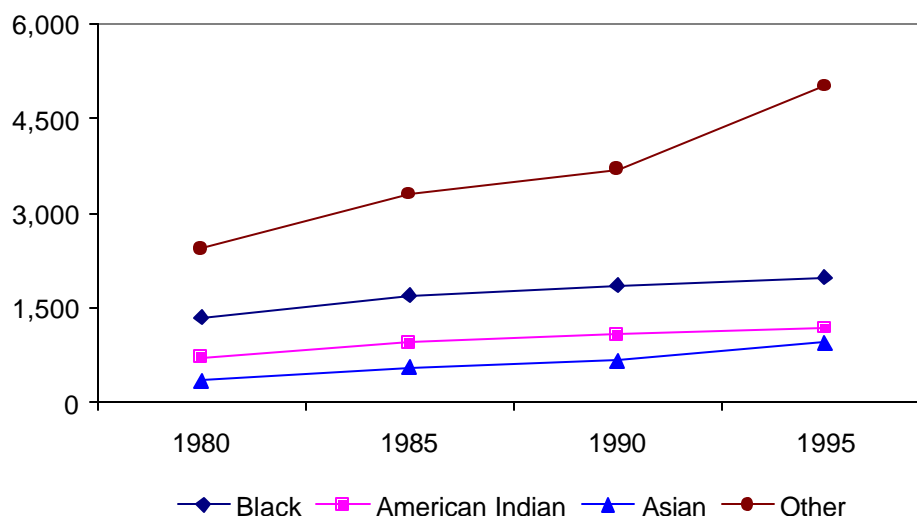


Sources: Arizona Department of Health Services, Arizona Health Status and Vital Statistics, 1979-1996; Applied Economics, 2001.

The mother's age distribution for Hispanic mothers contrasts greatly with the White mother's age at the time of birth, as seen in **Figure 3-9**. White births tend to reflect a shifting tendency toward mothers giving birth at an older age. The number of White births in the younger age cohorts, the three under age 25, barely increased during this time period while the white female population in these age cohorts increased noticeably. This is an important finding when considering that the Hispanic population is a significant subset of the White population, especially in births. It suggests significant variation in the reproductive tendencies between Hispanic and non-Hispanic White women in Maricopa County as Hispanic women consistently give birth at a much younger age.

Finally, **Figure 3-10** shows the total amount of births across the remaining race groups in Maricopa County from 1980 through 1995. Black, American Indian, and Asian births grew steadily, with the last group showing a slightly higher increase in 1995. Births in the Other race group have increased significantly as well, but in a staggering fashion. This is likely the result of the changing trends in race classifications in the 1990's, and changes in the race categories by the ADHS.

FIGURE 3-10
TOTAL BIRTHS SELECTED RACE CATEGORIES
MARICOPA COUNTY



Source: Arizona Department of Health Services, Arizona Health Status and Vital Statistics, 1979-1996; Applied Economics, 2001.

Birthrates

Although the absolute numbers of births are important, birthrates offer a comparative glance at trends across age and ethnicity during this period. The adjusted birth data combined with the female population provides the birthrates by mother's age and ethnicity (**Figure 3-11**). The rates are per 1,000 females in each age and race cohort. *Overall, the birthrates at all age cohorts have slowly been declining since 1980.* The highest birthrates can be found in the 20-24 age cohorts, with the 25-29 year cohort closing the gap. (**Figure 3-12**). With the exception of slight fluctuations in 1985, the overall distribution of birthrates by age is similar throughout the period.

FIGURE 3-11
BIRTHRATES BY MOTHER'S AGE AND RACE**
MARICOPA COUNTY

Year	Race	Mother's Age at Time of Birth						Total***
		15-19	20-24	25-29	30-34	35-39	40-44	
1980	White	67	139	126	68	22	4	63
	Black	131	201	141	67	22	8	97
	American Indian	98	167	152	97	58	22	88
	Asian	29	128	156	103	45	4	72
	Other	66	135	125	70	23	5	66
	Hispanic*	128	222	184	103	46	14	105
	County	70	142	127	69	23	4	65
1985	White	50	117	116	67	21	3	55
	Black	116	199	134	99	51	16	91
	American Indian	131	209	166	89	50	5	106
	Asian	23	103	144	113	35	7	66
	Other	72	140	127	81	27	5	71
	Hispanic*	138	230	177	110	45	12	106
	County	56	124	119	114	23	4	58
1990	White	51	118	121	81	30	5	56
	Black	156	180	128	81	26	5	81
	American Indian	135	158	108	74	36	3	78
	Asian	34	84	108	91	39	13	53
	Other	100	145	100	69	31	8	67
	Hispanic*	173	265	181	117	49	10	117
	County	62	124	119	80	30	5	58
1995	White	50	123	136	101	36	6	52
	Black	110	182	126	80	32	6	69
	American Indian	118	203	113	80	27	5	77
	Asian	27	110	121	111	42	9	53
	Other	113	195	125	69	29	7	78
	Hispanic*	133	230	151	83	33	8	93
	County	61	136	133	97	36	6	56

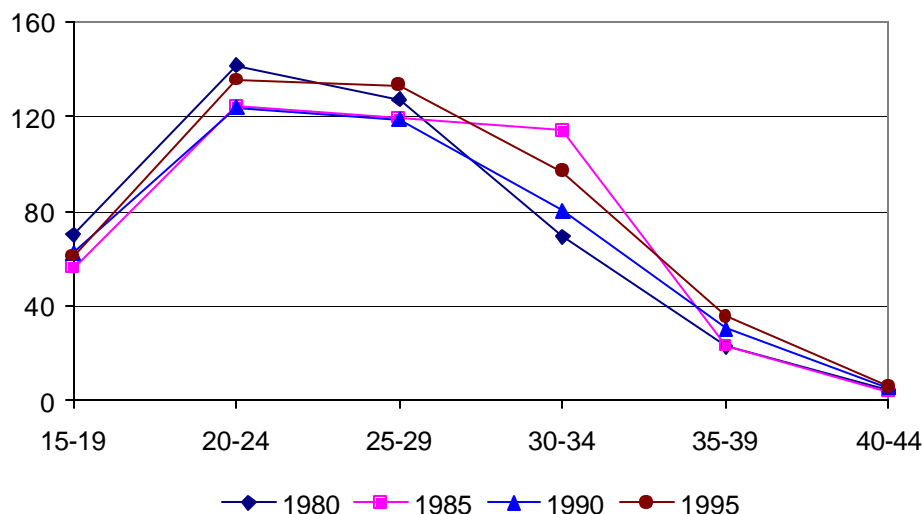
Sources: U.S. Bureau of the Census, 1980,1985,1990,1995; Arizona Department of Health Services, Arizona Health Status and Vital Statistics, 1980-1996; Applied Economics, 2001.

* Hispanic persons are included in all races.

** Rates of Births per 1,000 females in each race and age cohort.

*** Of Women age 10-50

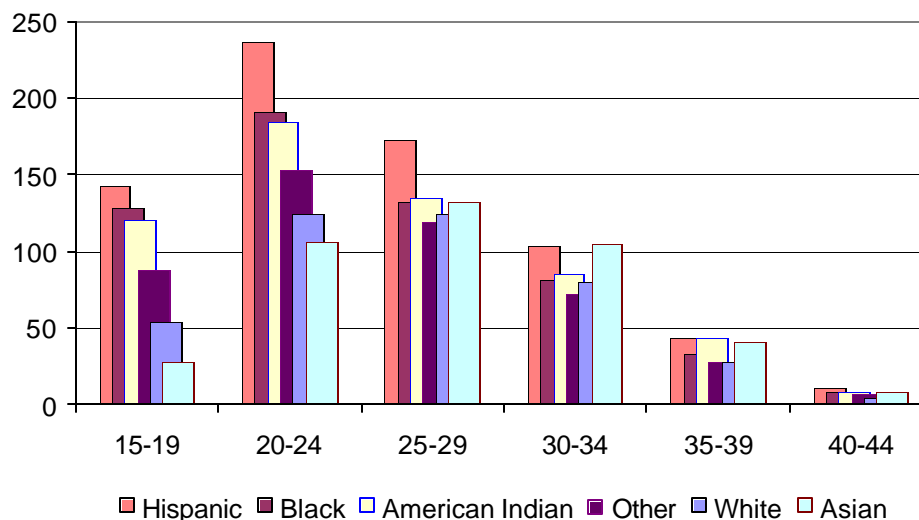
**FIGURE 3-12
BIRTHRATES BY MOTHER'S AGE
MARICOPA COUNTY**



Sources: U.S. Bureau of the Census, 1980,1985,1990,1995; Arizona Department of Health Services, Arizona Health Status and Vital Statistics, 1980-1996; Applied Economics, 2001.

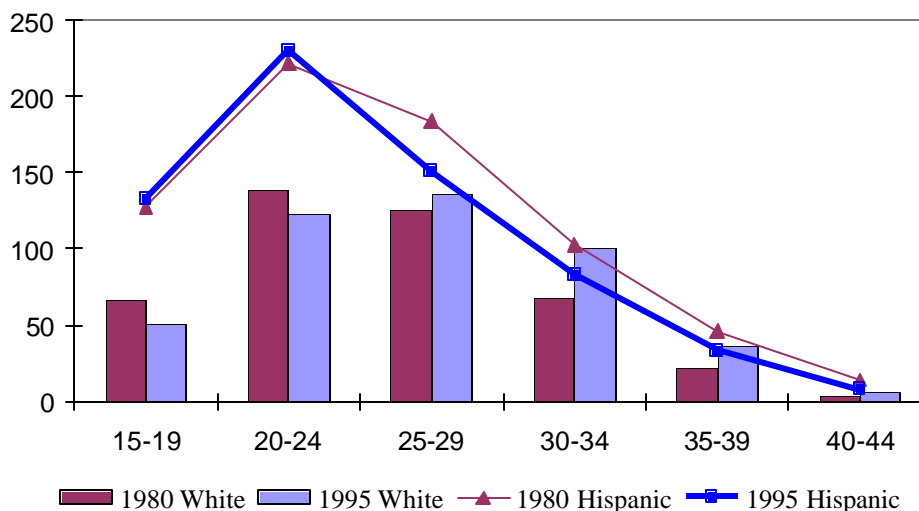
An examination of the birthrates by race and Hispanic origin over this time period shows disparities in reproductive tendencies of the Maricopa County population (Figure 3-13). On average, the Hispanic population has much higher birthrates than all other race groups, especially at the younger age cohorts. The birthrates among the Asian population are the lowest in the youngest age cohorts and the highest among the older age cohorts, opposite of the trends seen in other race groups. In most age cohorts, the White birthrates are considerably lower than those of the minority groups despite the significant presence of the prolific Hispanic population in the White cohort (Figure 3-14). This suggests that non-Hispanic White birthrates are even lower in the younger age cohorts than the data for White suggests.

FIGURE 3-13
AVERAGE BIRTHRATES BY MOTHER'S AGE, RACE, AND HISPANIC ORIGIN
MARICOPA COUNTY, 1980-1995



Sources: U.S. Bureau of the Census, 1980,1985,1990,1995; Arizona Department of Health Services, Arizona Health Status and Vital Statistics, 1980-1996; Applied Economics, 2001.

FIGURE 3-14
WHITE AND HISPANIC BIRTHRATES
MARICOPA COUNTY, 1980, 1995



Sources: U.S. Bureau of the Census, 1980,1985,1990,1995; Arizona Department of Health Services, Arizona Health Status and Vital Statistics, 1980-1996; Applied Economics, 2001.

3.2 *MORTALITY*

Mortality statistics were obtained in much the same way as the birth data. The total number of deaths in Maricopa County during the three years surrounding each Census year was gathered from the same source which reports fatalities by race and gender and by age. **Figures 3-15 and 3-16** show the raw mortality data as reported by the Arizona Department of Health Statistics. As a brief review of the tables indicates, there are too many inconsistencies in the original data to be able to use them directly in modeling.

Prior to the 1984 data, Hispanic deaths were not reported. Therefore, Hispanic deaths were estimated from the 1985, 1990, and 1995 relationships with the female and male Hispanic population in 1980. The same type of problems emerged in the Asian and Other categories. Again, overall county rates, as well as rates for each race from years with complete data, provided benchmarks for allocation of the mortality statistics.

Raw mortality data are only available by age and by race and gender. Therefore, national data for each corresponding census year was used to distribute age of the deceased across each race and gender category. The results of this process are shown in **Figures 3-17 through 3-20**. These tables represent the mortality statistics that are used in the demographic trends analysis.

**FIGURE 3-15
DEATHS BY AGE
MARICOPA COUNTY**

Year	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	U	Total
1979	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	10,919
1980	429	30	38	143	214	183	156	196	182	288	498	775	1,009	1,316	1,625	1,588	1,404	1,688	7	11,769
1981	394	37	47	145	195	161	164	168	213	299	442	723	1,000	1,388	1,683	1,636	1,450	1,773	5	11,923
1984	347	30	44	130	214	200	173	182	230	284	437	731	1,092	1,488	1,875	1,914	1,761	2,247	19	13,398
1985	394	40	34	133	209	203	187	207	222	289	471	704	1,163	1,502	1,783	2,002	1,762	2,340	16	13,661
1986	439	40	42	137	220	234	232	282	269	352	421	733	1,068	1,533	1,914	2,087	1,780	2,305	18	14,106
1989	442	40	39	122	203	219	246	282	325	374	448	695	1,098	1,606	1,997	2,314	2,137	2,902	6	15,495
1990	425	30	36	137	194	235	262	285	319	369	427	671	1,051	1,622	2,027	2,370	2,256	3,085	4	15,805
1991	409	28	33	155	157	228	254	283	390	423	500	685	1,035	1,542	1,998	2,328	2,277	3,317	6	16,048
1994	408	34	43	151	237	266	366	404	477	522	609	730	1,110	1,703	2,306	2,715	2,733	4,179	8	19,001
1995	400	25	52	183	232	257	358	442	541	490	651	777	1,107	1,579	2,310	2,693	2,887	4,344	12	19,340
1996	437	34	44	161	208	233	329	407	515	595	658	804	1,078	1,641	2,375	2,900	3,067	4,838	15	20,339

Source: Arizona Department of Health Services, Arizona Health Status and Vital Statistics, 1980-1996.

**FIGURE 3-16
DEATHS BY RACE AND HIPANIC ORIGIN AND GENDER
MARICOPA COUNTY**

Year	White		Black		AI		Asian		Other		Hispanic*		County Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
1979	na	na	na	na	na	na	na	na	na	na	na	na	6,277	4,642
1980	6,367	4,868	222	140	81	57	20	14	na	na	na	na	6,690	5,079
1981	6,473	4,880	234	144	90	58	22	22	na	na	na	na	6,819	5,104
1984	7,094	5,711	210	160	103	52	na	na	37	31	543	335	7,444	5,954
1985	7,309	5,809	202	152	83	54	na	na	30	22	525	290	7,624	6,037
1986	7,438	6,081	231	146	91	64	na	na	34	21	506	350	7,794	6,312
1989	7,917	6,849	300	207	93	71	na	na	36	22	634	403	8,346	7,149
1990	8,086	6,964	277	207	119	74	na	na	48	30	660	381	8,530	7,275
1991	8,142	7,118	281	225	107	74	na	na	58	43	691	432	8,588	7,460
1994	9,546	8,454	380	234	138	107	71	55	15	1	903	572	10,150	8,851
1995	9,595	8,728	368	246	148	108	80	53	7	7	1,028	589	10,198	9,142
1996	10,182	9,199	332	295	119	98	50	44	16	4	1,042	637	10,699	9,640

Source: Arizona Department of Health Services, Arizona Health Status and Vital Statistics, 1980-1996.

* Hispanic persons are included in all races.

FIGURE 3-17
DEATHS BY RACE AND HISPANIC ORIGIN, AGE, AND GENDER
MARICOPA COUNTY, 1980

Race		<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
White	F	103	10	11	30	33	30	33	42	57	91	157	237	323	436	561	683	2,038	4,874
	T	376	31	40	137	193	159	146	167	180	269	434	703	953	1,289	1,592	1,553	3,469	11,692
	M	273	21	30	107	160	129	113	126	122	178	277	466	630	853	1,031	871	1,432	6,818
Black	F	10	1	1	1	2	2	2	3	4	6	8	10	13	16	17	17	29	142
	T	24	2	2	5	8	9	9	10	12	17	24	31	35	42	42	39	59	370
	M	15	1	1	3	6	7	7	7	8	11	16	20	22	26	25	22	30	228
American Indian	F	4	0	0	1	1	1	1	1	2	2	3	4	5	6	7	7	12	58
	T	10	1	1	2	3	4	4	4	5	7	9	12	13	16	16	15	24	144
	M	6	0	0	1	2	3	3	3	3	4	6	8	8	10	9	8	12	86
Asian	F	3	0	0	1	1	1	1	1	1	2	3	3	4	4	4	4	11	44
	T	4	0	0	1	2	2	2	2	2	3	4	5	6	7	7	11	23	79
	M	1	0	0	0	1	1	1	1	1	1	1	2	2	2	2	7	12	36
Other	F	17	1	1	3	3	3	3	3	4	6	8	9	9	11	13	16	38	146
	T	34	6	6	18	22	19	15	15	17	22	31	38	38	45	52	58	64	498
	M	17	2	3	11	13	14	11	10	11	13	14	13	18	27	34	35	21	266
Hispanic*	F	14	1	1	2	3	4	6	6	7	9	12	17	24	27	31	33	74	271
	T	36	3	3	7	13	17	21	22	23	27	36	48	65	73	79	78	145	694
	M	23	2	2	6	10	13	15	16	16	18	24	31	41	45	47	45	71	424
County	F	135	13	13	35	39	37	41	50	68	106	179	264	354	474	601	727	2,128	5,263
	T	447	40	49	162	228	193	176	198	216	317	503	789	1,045	1,399	1,708	1,677	3,639	12,785
	M	312	25	34	124	182	154	134	146	146	207	314	509	680	919	1,101	943	1,506	7,435

Sources: Arizona Department of Health Services, Arizona Health Status and Vital Statistics, 1979, 1980, 1981; Applied Economics, 2001.

* Hispanic persons are included in all races.

FIGURE 3-18
DEATHS BY RACE AND HISPANIC ORIGIN, AGE, AND GENDER
MARICOPA COUNTY, 1985

Race		<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
White	F	156	14	13	35	49	51	50	64	78	105	155	255	410	581	759	889	2,395	6,059
	T	364	35	38	127	203	198	180	205	221	286	413	683	1,054	1,447	1,792	1,937	4,647	13,829
	M	208	21	25	92	155	146	129	141	143	181	258	429	644	866	1,033	1,048	2,252	7,771
Black	F	8	1	0	1	2	2	3	4	4	5	7	9	14	16	18	19	41	153
	T	19	1	1	4	7	9	11	12	12	14	19	26	35	39	42	41	75	366
	M	11	1	1	3	5	7	8	8	8	9	12	16	21	23	24	22	33	214
American Indian	F	3	0	0	0	1	1	1	1	1	2	3	4	5	6	7	7	15	57
	T	8	1	1	2	3	4	4	5	5	6	8	10	14	16	17	17	31	149
	M	5	0	0	1	2	3	3	3	3	4	5	7	9	10	10	10	15	92
Asian	F	3	0	0	1	1	1	1	1	1	1	2	2	3	2	3	3	7	32
	T	4	0	0	1	2	2	2	3	2	3	4	5	6	6	6	6	13	66
	M	2	0	0	0	1	1	1	1	1	1	2	3	3	4	4	4	6	34
Other	F	23	2	2	4	5	5	4	5	5	6	8	10	13	13	16	18	25	163
	T	53	5	5	14	22	20	16	16	15	17	22	29	34	35	37	42	48	430
	M	30	3	3	11	17	15	11	12	10	11	14	18	21	22	21	24	23	267
Hispanic*	F	17	1	1	2	3	5	7	8	9	11	15	20	29	33	38	40	113	350
	T	45	3	3	9	16	21	26	28	28	33	44	58	80	89	96	95	251	925
	M	28	2	2	7	13	16	19	20	19	22	29	38	51	56	58	56	138	575
County	F	192	17	16	40	56	61	60	75	90	119	174	280	444	618	802	935	2,484	6,463
	T	449	42	45	148	236	233	213	241	256	325	466	752	1,143	1,543	1,894	2,043	4,813	14,841
	M	256	25	29	107	180	172	153	166	166	206	292	472	699	925	1,092	1,107	2,329	8,378

Sources: Arizona Department of Health Services, Arizona Health Status and Vital Statistics, 1984, 1985, 1986; Applied Economics, 2001.

* Hispanic persons are included in all races.

FIGURE 3-19
DEATHS BY RACE AND HISPANIC ORIGIN, AGE, AND GENDER
MARICOPA COUNTY, 1990

Race		<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
White	F	183	14	15	60	80	98	108	120	147	168	198	298	465	702	892	1,044	3,084	7,676
	T	394	31	33	129	172	211	233	258	317	361	425	641	1,002	1,513	1,922	2,249	4,934	14,825
	M	211	17	18	69	92	113	125	138	170	194	228	343	537	811	1,029	1,205	2,250	7,549
Black	F	11	1	1	1	2	3	5	6	7	7	9	12	16	21	24	25	63	213
	T	26	1	2	7	10	13	17	20	21	21	24	31	41	51	53	53	107	499
	M	15	1	1	6	8	10	12	14	15	14	15	19	24	30	29	27	44	285
American Indian	F	1	0	0	0	0	0	1	1	1	1	2	3	4	6	8	10	33	73
	T	4	0	0	1	2	2	3	3	4	5	6	8	13	18	22	25	63	180
	M	2	0	0	1	1	2	2	3	3	3	4	6	9	12	14	15	29	107
Asian	F	4	0	0	1	2	2	3	3	3	4	3	4	5	6	5	4	7	55
	T	5	0	0	2	2	3	4	4	4	5	5	7	9	11	11	10	19	101
	M	1	0	0	0	1	1	1	1	1	1	2	3	4	5	6	6	12	46
Other	F	26	2	2	7	9	10	9	9	9	9	9	13	17	15	18	18	33	214
	T	55	4	4	16	20	22	21	22	21	21	23	29	36	35	35	41	91	497
	M	30	2	2	9	11	13	12	13	12	12	14	16	19	20	17	23	58	283
Hispanic*	F	7	1	1	2	2	2	4	4	6	7	10	15	23	34	44	55	88	305
	T	23	2	3	8	11	14	18	21	25	28	34	50	77	109	132	149	163	867
	M	15	1	2	7	9	11	15	17	19	21	24	35	54	75	88	93	76	562
County	F	224	17	18	69	93	113	126	139	167	189	221	329	507	750	947	1,102	3,220	8,230
	T	483	37	41	155	207	251	277	307	368	413	484	716	1,100	1,628	2,043	2,378	5,214	16,101
	M	259	20	22	86	114	138	152	169	201	224	263	387	593	878	1,096	1,276	2,394	8,271

Sources: Arizona Department of Health Services, Arizona Health Status and Vital Statistics, 1989, 1990, 1991; Applied Economics, 2001.

* Hispanic persons are included in all races.

FIGURE 3-20
DEATHS BY RACE AND HISPANIC ORIGIN, AGE, AND GENDER
MARICOPA COUNTY, 1995

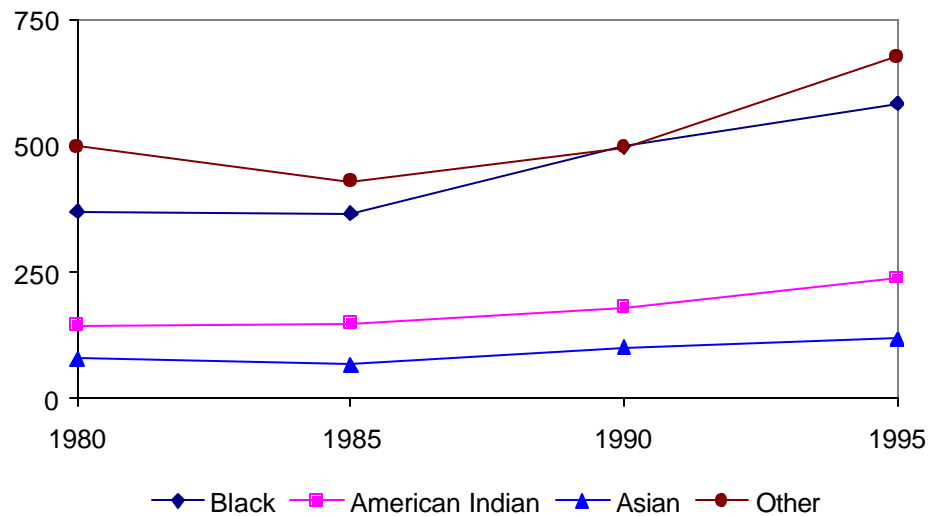
Race		<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
White	F	176	13	20	71	97	108	150	178	221	231	278	336	485	733	1,053	1,264	3,374	8,788
	T	372	27	41	150	205	228	316	377	466	488	587	710	1,024	1,547	2,224	2,670	7,631	19,062
	M	196	14	22	79	108	120	167	198	245	257	309	374	539	814	1,171	1,405	4,257	10,274
Black	F	11	1	1	2	2	4	6	8	9	10	11	14	18	24	29	29	80	258
	T	26	2	2	9	12	14	21	26	30	30	32	37	46	59	67	63	109	585
	M	16	1	2	7	10	10	15	18	21	20	21	23	28	35	38	34	29	328
American Indian	F	6	1	1	1	2	2	3	4	3	4	5	7	8	10	11	10	26	104
	T	12	1	2	5	7	8	11	12	11	13	14	16	19	22	24	20	44	239
	M	7	1	1	4	5	6	7	8	7	8	8	9	10	12	13	9	18	135
Asian	F	2	0	0	0	1	1	1	1	2	2	2	3	4	5	6	7	16	51
	T	4	0	1	2	2	2	3	3	4	5	6	7	8	11	14	14	34	119
	M	2	0	0	1	1	1	2	2	2	3	3	4	5	6	8	8	18	67
Other	F	26	2	2	8	12	11	13	13	14	13	14	15	19	21	22	22	64	292
	T	56	4	5	18	27	26	30	31	33	29	31	34	42	48	52	49	164	677
	M	29	2	3	10	15	14	17	17	19	17	18	19	22	27	30	27	100	385
Hispanic*	F	9	1	1	2	2	3	5	7	9	12	15	20	30	46	65	80	291	599
	T	27	3	3	11	14	16	25	32	37	44	53	67	99	145	192	217	606	1,590
	M	18	2	2	9	11	13	20	25	28	32	37	47	69	99	127	137	315	991
County	F	221	16	24	82	113	125	173	205	249	260	311	374	534	793	1,120	1,333	3,560	9,493
	T	470	35	51	183	252	278	381	448	543	564	670	803	1,138	1,688	2,380	2,816	7,982	20,682
	M	250	18	27	101	139	152	207	244	294	304	359	429	605	895	1,260	1,483	4,422	11,189

Sources: Arizona Department of Health Services, Arizona Health Status and Vital Statistics, 1994, 1995, 1996; Applied Economics, 2001.

* Hispanic persons are included in all races.

The total number of deaths in the minority groups is reflective of overall tendencies for all racial groups during the time period analyzed (**Figure 3-21**). In general, medical advancements during the early 1980's slowed mortality growth. Finally, mortality did not grow at the same level as overall population growth signaling an aging population. **Specific death rates by age and race cohort can be found in Tables 15 through 26 in Appendix B.**

**FIGURE 3-21
DEATHS IN SELECT RACE GROUPS
MARICOPA COUNTY**



Sources: Arizona Department of Health Services, 1979-1996; Applied Economics, 2001.

4.0 MIGRATION

The purpose of this chapter is to provide background data on migratory trends in Maricopa County since 1980. This chapter consists of three sections. The first two present national and international migration data from the Internal Revenue Service and the Immigration and Naturalization Service while the third section presents the findings of the natural population growth analysis to determine the composition of migration to Maricopa County from 1980 through 1995. The analysis presented in this chapter is designed to highlight the *geographic* and *demographic* nature of migration to and from Maricopa County.

4.1 INTERNAL REVENUE SERVICE MIGRATION DATA

Migration data for Maricopa County was purchased from the United States Internal Revenue Service for the years 1984 through 1999. The data provides annual immigration (in-migration) and emigration (out-migration) data based on tax claims filed each year and as such, they offer an excellent starting point for identifying migration patterns. The number of returns can be used to estimate the number of households while the number of exemptions approximates population. The data is compiled on a county to county level for all United States counties. **Figure 4-1** below shows the total inflow and outflow of tax returns and exemptions in Maricopa County from 1984 through 1999 and **Figure 4-2** is a visual representation of the data.

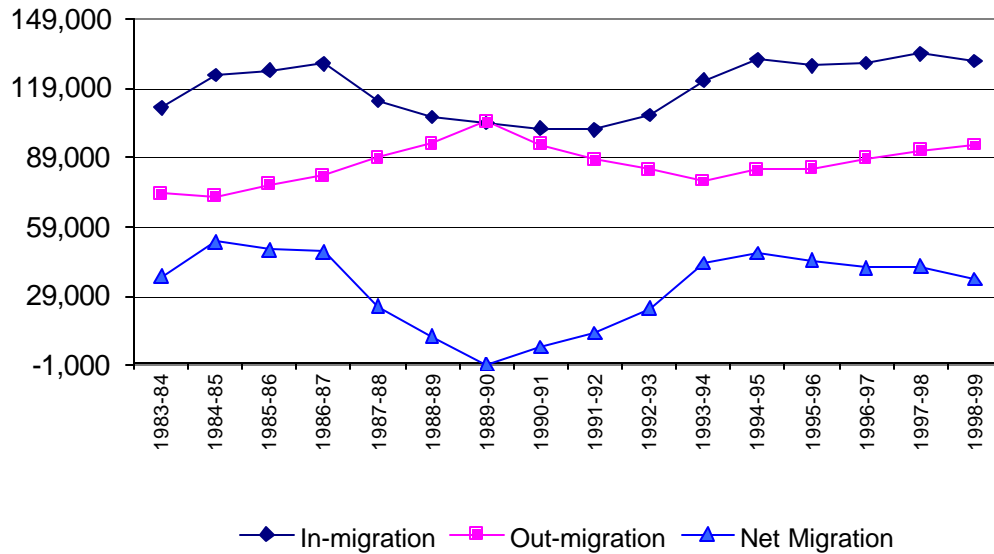
FIGURE 4-1
MIGRATORY MOVEMENTS
MARICOPA COUNTY

	In-Migration		Out-Migration		Net Migration	
	Returns	Exemptions	Returns	Exemptions	Returns	Exemptions
1984-85	61,781	124,809	35,795	72,283	25,986	52,526
1985-86	63,459	126,742	38,834	77,451	24,625	49,291
1986-87	65,316	129,729	40,902	81,312	24,414	48,417
1987-88	58,716	113,509	44,993	88,910	13,723	24,599
1988-89	55,699	106,618	49,002	95,077	6,697	11,541
1989-90	54,517	103,995	53,072	104,586	1,445	-591
1990-91	52,160	101,486	47,091	94,548	5,069	6,938
1991-92	52,263	101,106	44,262	88,184	8,001	12,922
1992-93	55,458	107,313	41,883	83,782	13,575	23,531
1993-94	62,646	122,338	39,925	78,961	22,721	43,377
1994-95	68,004	131,568	43,050	83,868	24,954	47,700
1995-96	66,870	128,704	43,266	84,177	23,604	44,527
1996-97	69,057	130,122	46,343	88,815	22,714	41,307
1997-98	71,499	134,114	48,278	92,211	23,221	41,903
1998-99	69,934	130,968	50,127	94,473	19,807	36,495

Source: IRS, Statistics of Income, 1984 to 1999.

It is important to note that these data do not reflect exact migration totals since the IRS cannot capture the entire population through tax returns of those who file taxes. There is a high level of undercounting since not everyone files taxes, and not all the exemptions are always claimed. However, the data is very useful in revealing migratory trends over time. The biggest periods of net migration for Maricopa County were the mid 1980's as well as the mid 1990's. From 1988 through 1991 net migration in Maricopa County dropped markedly as immigration decreased and emigration out of the County increased. The migration trends reflect the national and regional economic climate during those years.

**FIGURE 4-2
MIGRATORY MOVEMENTS
MARICOPA COUNTY**



Source: IRS, Statistics of Income, 1984-1999.

The IRS data also provides information as to the origin and destination of migrants in and out of Maricopa County. **Figure 4-3** highlights the top states of origin and destination for migration in Maricopa County. The two states that provide the most migrants to and from Maricopa County, by an overwhelming margin, are Arizona and California. This reflects a very high migrant intra-state population within Arizona, as well as significant movement to and from California. The states with the highest net migration are California, Illinois, Michigan, and Texas.

The leading metropolitan origin of immigrants and destinations of emigrants from Maricopa County from 1984 through 1999 are generally cities within the leading origin states (**Figure 4-4**). Again, cities in California and Arizona dominate the list, which may reflect the temporary nature of many immigrants to the Phoenix area. Geographic, climatic, and economic similarities of Phoenix, Tucson, Las Vegas, and the Southern California cities are the key factors promoting migration among these areas. It is interesting to highlight the case of Chicago, a city that exported approximately 70,000 people during the fifteen-year period yet only imported about 24,000 from Maricopa County making it the leading city of net migration. Following Chicago are Los Angeles, Tucson, Detroit, Minneapolis, and New York. This may suggest that immigrants from these cities, as well as other areas in the Industrial Midwest and Northeast, relocate to Maricopa County on a more permanent basis. The full set of IRS data is listed in Appendix B in Tables 1 through 6. Tables 1 through 3 list in-migration and out-migration for all 50 states during 5-year periods, and Tables 4-6 provide the same data for metropolitan areas.

FIGURE 4-3
TOP 15 STATES OF ORIGIN AND DESTINATION
MIGRATION TO AND FROM MARICOPA COUNTY, 1984-1999

In-Migration			Out-Migration			Net Migration		
State	Returns	Exemptions	State	Returns	Exemptions	State	Returns	Exemptions
California	146,514	297,079	Arizona	122,853	253,966	California	35,526	96,557
Arizona	122,640	241,786	California	110,988	200,522	Illinois	28,976	55,772
Illinois	45,955	85,927	Texas	30,782	63,616	New York	17,028	32,295
Texas	38,956	79,852	Colorado	27,241	52,205	Michigan	12,046	20,894
Colorado	36,837	69,171	Washington	20,754	39,596	Colorado	9,596	16,966
Washington	23,861	45,430	Nevada	19,369	38,064	Ohio	8,553	13,996
Foreign			Foreign					
Address	23,568	45,270	Address	16,492	32,278	New Jersey	8,398	15,756
New York	24,716	44,739	Illinois	16,979	30,155	Texas	8,174	16,236
New Mexico	21,052	42,837	New Mexico	13,663	28,704	Minnesota	7,756	13,292
Michigan	20,557	36,676	Florida	13,832	25,881	Wisconsin	7,678	12,805
Utah	14,943	35,060	Oregon	12,315	24,686	Pennsylvania	7,575	12,966
Florida	17,479	32,330	Utah	10,536	24,611	New Mexico	7,389	14,133
Ohio	17,355	31,004	Ohio	8,802	17,008	Iowa	5,583	8,926
Nevada	15,364	29,274	Michigan	8,511	15,782	Indiana	5,310	9,388
Minnesota	15,657	27,488	Minnesota	7,901	14,196	Massachusetts	4,703	8,300

Source: IRS, Statistics of Income, 1984 to 1999.

FIGURE 4-4
TOP 15 METROPOLITAN AREAS OF ORIGIN AND DESTINATION
MIGRATION TO AND FROM MARICOPA COUNTY, 1984-1999

In-Migration			Out-Migration			Net Migration		
City	Returns	Exemptions	City	Returns	Exemptions	City	Returns	Exemptions
Los Angeles	41,433	85,689	Tucson	27,406	49,768	Chicago	23,641	46,374
Chicago	37,490	70,578	Los Angeles	24,432	40,712	Los Angeles	17,001	44,977
Tucson	34,668	63,185	San Diego	20,628	35,915	Tucson	7,262	13,417
San Diego	19,360	37,273	Las Vegas	16,055	31,865	Detroit	6,936	12,355
Denver	18,900	35,893	Denver	14,718	27,889	Minneapolis	5,559	9,476
Riverside	15,808	34,802	Flagstaff	14,404	26,419	New York	5,405	10,696
Anaheim	17,297	34,567	Chicago	13,849	24,204	Boston	4,929	8,803
Flagstaff	14,850	26,846	Riverside	11,450	23,980	Nassau, NY	4,657	9,343
Salt Lake City	9,652	22,481	Anaheim	13,133	23,437	Riverside	4,358	10,822
Seattle	12,208	22,393	Seattle	11,633	21,264	Denver	4,182	8,004
Las Vegas	11,477	22,090	Portland	8,409	16,907	Anaheim	4,164	11,130
Minneapolis	12,612	22,053	Salt Lake City	6,885	16,183	Philadelphia	3,632	6,646
Detroit	11,984	21,720	Dallas	7,627	15,033	Milwaukee	3,604	6,305
Albuquerque	9,845	19,513	Albuquerque	6,593	13,039	Albuquerque	3,252	6,474
Dallas	8,762	17,533	Minneapolis	7,053	12,577	Colorado Springs	2,905	5,137

Source: IRS, Statistics of Income, 1984 to 1999.

4.2 IMMIGRATION AND NATURALIZATION SERVICE DATA

The Immigration and Naturalization Service provides yearly data on immigration in the United States. Legal immigrants are those who have secured proper documentation to reside in the United States. In addition to legal immigrants there are those who are nonimmigrant residents, who work in the country with no intention of becoming a resident or citizen, such as foreign government officials, visitors, students, and temporary workers. For these two categories of people, there is a considerable amount of reliable data because of extensive documentation required to obtain the proper paperwork, however the data presented in this chapter considers only legal and illegal immigrants, not nonimmigrant residents.

Figure 4-5 presents the total number of immigrants admitted to the United States with Arizona as the intended state of residence, for select years. Around half of the legally admitted immigrants to Arizona list the Phoenix MSA as their intended area of residence (**Figure 4-6**). In the 1990's Mexican immigrants accounted for about 66 percent of all legal immigrants in the Phoenix area, compared to 26 percent nationwide. *It is surprising to note that in spite of its proximity to Mexico, the metropolitan Phoenix area is not one of the leading metropolitan destinations for legal migration;* in most years, it was not among the top 20 metropolitan destinations.

The State of Arizona averaged only about 1.2 percent of total legal migration in the United States from 1982 through 1998. That share was higher in 1990 through 1992, which also corresponds with a rise in the overall number of immigrants admitted in the United States. Note that these years were the only time that Arizona's share of legal immigrants exceeded its population share. In general, Arizona had less international immigrants than overall population share during this time period.

FIGURE 4-5
IMMIGRANTS ADMITTED TO ARIZONA
AS INTENDED RESIDENCE

Year	Arizona	United States	AZ Share of Immigration	AZ Share of Population
1982	5,024	594,131	0.85%	1.25%
1983	5,444	559,763	0.97%	1.27%
1984	5,289	543,903	0.97%	1.30%
1985	6,131	570,009	1.08%	1.34%
1986	7,133	601,708	1.19%	1.38%
1987	7,189	601,516	1.20%	1.42%
1988	na	643,025		1.45%
1989	na	1,090,924		1.47%
1990	23,737	1,536,483	1.54%	1.47%
1991	40,642	1,827,167	2.22%	1.49%
1992	15,792	973,977	1.62%	1.52%
1993	9,778	904,292	1.08%	1.55%
1994	9,141	804,416	1.14%	1.59%
1995	7,700	720,461	1.07%	1.64%
1996	8,900	915,900	0.97%	1.67%
1997	8,632	798,378	1.08%	1.70%
1998	6,211	660,477	0.94%	1.73%

Sources: INS, *Statistical Yearbook*. Select years. Bureau of the Census, 1982-1998.

FIGURE 4-6
IMMIGRANTS ADMITTED TO PHOENIX
AS INTENDED RESIDENCE

Year	Immigrants
1989	7,142
1990	14,714
1991	21,027
1992	na
1993	na
1994	na
1995	na
1996	4,343
1997	5,022
1998	3,290

Source: INS, Statistical Yearbook. Select years.

While Arizona may not be a leading state for legal migration, it is among the top ten states with the largest illegal immigrant population. According to the INS statistics for 1992 and 1996, Arizona had an estimated 57,000 and 115,000 illegal immigrants (Figure 4-7). The INS does not estimate the illegal population on a regular basis because of the difficulties, methods, and inaccuracies implied in the process.

FIGURE 4-7
ESTIMATED ILLEGAL IMMIGRANT POPULATION
ARIZONA AND UNITED STATES

Year	Arizona	United States
1992	57,000	3,379,000
1996	115,000	5,000,000

Source: INS, 1996, 1992.

The INS estimates the undocumented illegal population to be comprised of about 40 percent visa overstays, or non-immigrants who overstayed their original stay. The remainder consists of people who enter without inspection (EWI), which is extremely difficult to estimate and has a large margin of error. Since EWI's are for the most part Mexican, these figures are based on adjustments and subtractions made from the CPS count of Mexican born population. The composition of the estimates of total illegal population includes these sources, mortality, emigration, and estimates of the population who entered before 1982 and did not legalize themselves under the Immigration Reform and Control Act of 1986. Therefore, INS issues a strong word of caution over the use of these statistics. Estimates for areas with a large amount of Mexican EWI population tend to have the largest amount of error.

While Arizona is among the top 10 states in terms of illegal alien population, in 1996 it only accounted for 2.3 percent of the estimated illegal population in the United States. California is estimated to have the largest share of illegal immigrants, about 43 and 40 percent in 1992 and 1996, respectively. California, Texas, New York, and Florida combined have an estimated 70 percent of the total illegal alien population in the United States. Therefore, while it may seem that Arizona has an elevated amount of both illegal and legal immigrants, the total amount, and likely the share, are much lower than those of other states.

While Maricopa County may not be the final destination of undocumented illegals who cross the border in Arizona, it is likely that many who cross the border illegally through Arizona will stay for a period in the Phoenix area before moving on. Therefore, it is interesting to note an increasing trend in the number of apprehensions in the Arizona border area and deportations from the Phoenix INS District (Figure 4-8). While the number of expelled includes aliens in both the States of Arizona and Nevada, it does indicate

an increasing share of illegal population either living in, or being apprehended in Arizona. The Phoenix District's share has increased noticeably since heightened enforcement at the traditional crossing areas in California and Texas has channeled illegal crossing towards the Arizona and New Mexican borders. **Figure 4-9** shows the percentage of apprehension activity in the top five district offices that handle the expulsion of over 93 percent of illegal immigrants. Again, apprehensions at traditional crossings at the San Diego and El Paso areas have decreased the amount of aliens expelled by those offices, presumably because traffic has decreased, while expulsion activity through non-traditional districts such as Phoenix and Harlingen have increased.

FIGURE 4-8
ALIENS EXPELLED BY DISTRICT OFFICE
PHOENIX, ARIZONA

Year	Phoenix	United States	Phoenix Share
1986	162,461	1,611,471	10.1%
1987	114,788	1,116,278	10.3%
1996	359,512	1,641,455	21.9%
1997	323,202	1,554,043	20.8%
1998	489,245	1,742,364	28.1%

Source: INS, *Statistical yearbook*. Select years.

FIGURE 4-9
ALIENS EXPELLED BY DISTRICT OFFICE
SHARE OF TOTAL

Year	Phoenix, AZ	San Diego, CA	Harlingen, TX	El Paso, TX	San Antonio, TX
1986	10.1%	43.7%	6.9%	20.2%	16.3%
1987	10.3%	47.9%	5.5%	21.2%	12.4%
1996	21.9%	34.9%	12.5%	9.9%	15.8%
1997	20.8%	29.7%	16.1%	9.2%	17.0%
1998	28.1%	30.5%	11.9%	8.9%	14.2%

Source: INS, *Statistical yearbook*. Select years.

Due to the increased awareness of illegal trafficking of people and goods across the southwest border with Mexico, the Border Patrol, a branch of the INS, has increased its presence and apprehensions since the early 1990's (**Figure 4-10**). As the table indicates, the illegal crossing activity in Arizona increased four-fold over the seven-year period, from about 88,000 to over 460,000. The rise in the amount of detainees can be attributed to both more illegal crossing and increased law enforcement. In 1991 less than 10 percent of all BP detentions occurred in Arizona, and in 1998 that share had increased to over 30 percent. The post-1994 increase in border crossing can be attributed to Operation Gatekeeper, a BP program in San Diego designed to deter illegal immigration through California forcing illegal crossing eastward into Arizona and New Mexico. However, there was also a sizeable increase in the Border Patrol staff and funding in the Tucson and Yuma sectors. Note that due to the success of Operation Gatekeeper in the San Diego area, the Border Patrol has launched three other operations to deter illegal crossing along the southwest border, including Operation Safeguard in Arizona.

FIGURE 4-10
DEPORTABLE ALIENS LOCATED BY BORDER PATROL
ARIZONA

Year	Arizona	Annual Growth	U.S.-Mexico Border	Arizona Growth Index*
1991	88,374		1,077,876	100
1992	95,928	8.55%	1,145,574	102
1993	116,187	21.12%	1,212,886	117
1994	160,684	38.30%	979,101	200
1995	248,423	54.60%	1,271,390	238
1996	333,658	34.31%	1,507,020	270
1997	302,574	-9.32%	1,368,707	270
1998	463,601	53.22%	1,516,680	373

Source: INS, Statistical Yearbook. Select Years.

*Arizona compared to entire U.S-Mexico border, 1991=100.

In conclusion, Maricopa County receives relatively few legal immigrants each year, averaging about 7,000 annually from 1991 to 1998. The estimated illegal immigrant population statewide increased about 25 percent yearly from 1992 through 1996 to about 115,000. However, illegal border crossing in Arizona has increased dramatically between 1991 and 1998, as the area has seen more detentions and a higher share nationwide. These factors may cause an exaggeration in the local perception of the size of the illegal population in Maricopa County

4.3 STUDY MIGRATION ESTIMATES

This section presents the results of analyzing the demographic characteristics of migration based on natural population growth with data from the Census and the vital statistics. Using an age-cohort survival model for 17 age cohorts across 12 race and gender groups, a natural growth rate was determined and applied to each census year for five years. The difference between the natural growth and Census count of each gender and race group of the next Census provides an estimate of net migration for Maricopa County for each of the three five-year periods. The individual worksheets showing the natural population growth and the net migration for each race and gender group can be found in Appendix B, Tables 7 through 18. The results of net migration by gender and age cohort for this period, shown in **Figures 4-11** and **4-12**, detail the demographic characteristics of migration to Maricopa County.

The age groups with the highest net migration are the 20 through 40 age groups, indicating the influx of young workers to Maricopa County. Net migration decreases among the older working age cohorts, until the 60-year old cohort where it picks up again. This is expected because of the immigration of retirees to the area. Finally, net migration tapers off among the population over age 75.

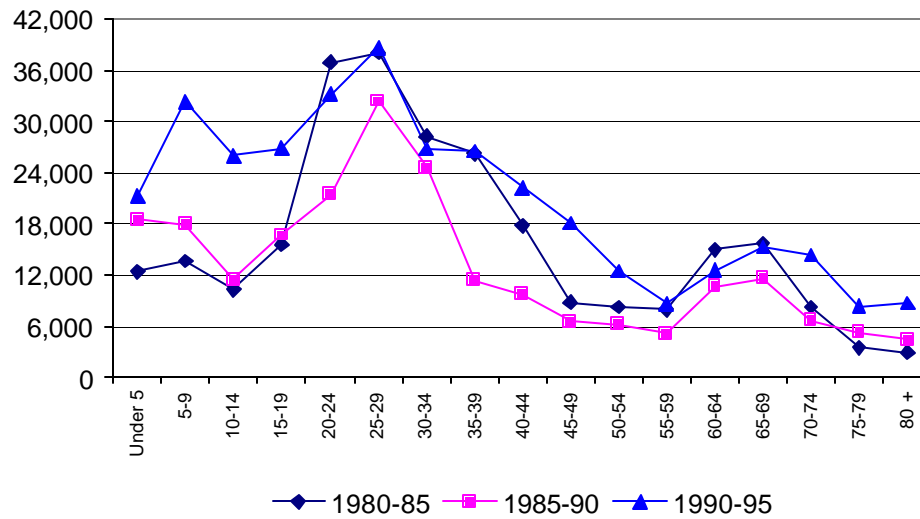
There seems to be a slight anomaly in the 1990-95 net migration of the very young. This is the result of an extremely high young male population reported in the 1995 special census of Maricopa County. It is possible that the type of immigration that occurred between 1990 and 1995 included a higher share of people with children. However, the gender distribution would still be in question. The 1995 Census shows an abnormally high amount of White males under the age of five (Figure 3, Appendix A). Note this age cohort in 1995 is 17 percent higher than the corresponding female cohort in that year.

FIGURE 4-11
TOTAL NET MIGRATION
MARICOPA COUNTY

Year		Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
1980-85	F	3,215	4,335	3,847	5,186	17,492	19,166	13,269	12,451	7,223	2,585	2,263	3,095	8,493	6,754	3,750	958	1,056	115,138
	M	2,921	4,635	3,915	8,105	20,227	22,531	15,069	14,767	9,375	3,741	3,934	3,717	7,635	8,648	5,530	2,042	262	137,054
	T	6,137	8,970	7,761	13,291	37,719	41,697	28,338	27,218	16,598	6,326	6,197	6,812	16,129	15,402	9,280	3,000	1,318	252,193
1985-90	F	7,884	7,362	4,590	6,194	8,347	18,539	14,726	6,912	5,982	3,691	2,682	1,379	4,933	7,517	4,768	3,166	1,427	110,099
	M	8,964	9,751	5,269	7,445	8,914	17,772	13,977	4,180	4,809	1,585	241	1,341	3,665	5,786	2,763	1,696	846	99,005
	T	16,847	17,114	9,860	13,640	17,260	36,312	28,703	11,092	10,792	5,276	2,924	2,720	8,598	13,303	7,531	4,862	2,272	209,104
1990-95	F	5,447	9,470	7,252	6,506	13,433	16,736	17,799	17,170	12,452	10,458	5,547	3,128	4,128	7,278	8,174	3,351	2,112	150,441
	M	14,053	21,852	18,795	17,261	16,836	18,408	14,389	12,845	8,774	7,847	5,156	3,150	4,626	7,041	7,892	5,016	4,852	188,792
	T	19,500	31,322	26,046	23,767	30,268	35,144	32,188	30,014	21,227	18,305	10,703	6,278	8,754	14,319	16,066	8,367	6,963	339,233

Source: Applied Economics, 2001.

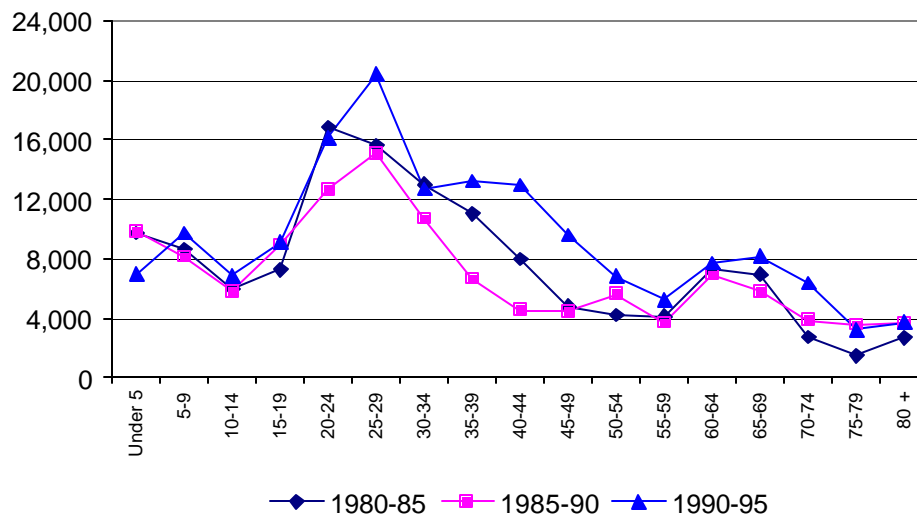
**FIGURE 4-12
TOTAL NET MIGRATION BY AGE COHORT
MARICOPA COUNTY**



Source: Applied Economics, 2002.

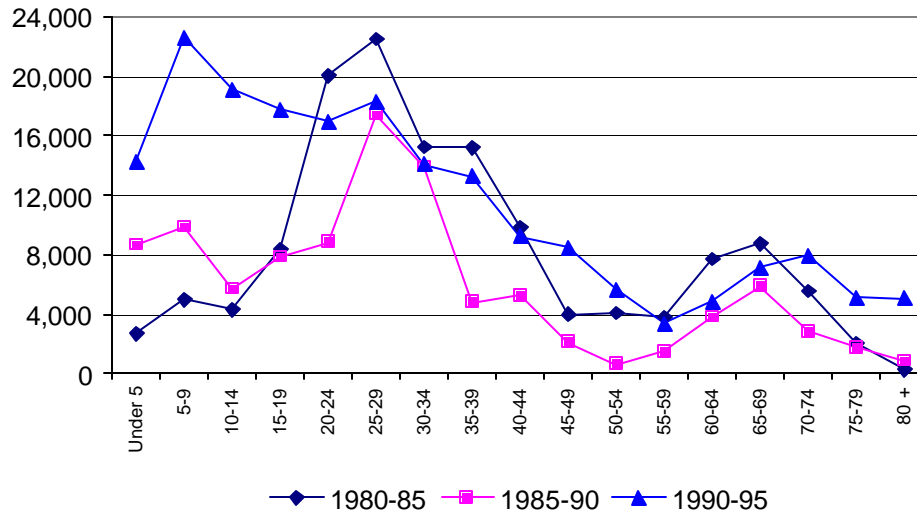
Figures 4-13 and 4-14 show female and male net migration for the entire population. *The female migration pattern closely resembles the male, but does not have the extremely high 1990-1995 migration totals that the young male population reflects, again likely the result of the extremely high under 5 White male cohort in 1995.*

**FIGURE 4-13
FEMALE NET MIGRATION BY AGE COHORT
MARICOPA COUNTY**



Source: Applied Economics, 2002.

FIGURE 4-14
MALE NET MIGRATION BY AGE COHORT
MARICOPA COUNTY



Source: Applied Economics, 2002

4.3.1 Racial Population Trends in Migration

An examination of net migration by race and gender also indicates some interesting trends. **Figures 4-15** through **4-17** present the net migration for each race and sex group during 1980-85, 1985-90, and 1990-95, respectively. *Migration trends among each race and sex groups varied significantly throughout the period. By in large, the migration of the White female and male populations are the largest and most prominent, therefore the trends are very similar to those of the county totals (Figures 4-18 and 4-19).* Note the sharper increase among the White retired age population, a trend that is not nearly as evident among the other racial groups suggesting the influx of retirees has been generally composed primarily of Whites.

FIGURE 4-15
NET MIGRATION
MARICOPA COUNTY, 1980-1985

		Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
White	F	1,999	3,721	3,220	4,376	14,589	16,147	11,755	11,097	6,792	2,742	2,377	3,216	8,350	6,850	3,741	1,031	1,148	103,153
	M	2,062	3,836	3,188	6,153	16,570	18,622	13,274	12,976	8,755	3,683	3,705	3,851	7,583	8,630	5,620	2,042	488	121,038
	T	4,061	7,558	6,408	10,529	31,159	34,769	25,029	24,073	15,547	6,425	6,082	7,067	15,934	15,481	9,361	3,073	1,636	224,191
Black	F	85	106	316	99	404	587	402	411	169	74	78	81	71	47	45	-14	-38	2,922
	M	-36	238	309	291	614	681	488	521	185	71	95	-4	11	-47	-73	-57	-143	3,143
	T	49	344	625	390	1,018	1,267	890	932	354	145	173	76	82	0	-27	-71	-182	6,066
American Indian	F	-4	-29	-57	135	254	43	-27	-80	-63	-88	-83	-68	-34	-62	-14	-5	-35	-215
	M	-115	-76	-99	131	104	163	11	63	-49	-13	8	-21	-8	9	-12	5	-34	67
	T	-119	-105	-155	267	359	206	-17	-17	-111	-101	-75	-89	-42	-54	-26	0	-69	-149
Asian	F	375	350	403	384	507	802	577	527	208	60	100	44	61	8	15	2	15	4,438
	M	452	424	469	589	763	825	667	413	247	147	109	22	53	18	11	5	7	5,220
	T	827	774	872	972	1,270	1,626	1,243	940	456	207	209	65	114	26	26	7	22	9,658
Other	F	760	186	-35	192	1,738	1,588	563	495	116	-204	-209	-178	45	-89	-37	-56	-34	4,840
	M	557	213	46	942	2,176	2,240	630	794	236	-145	17	-129	-4	37	-17	48	-56	7,586
	T	1,318	399	11	1,134	3,914	3,828	1,193	1,289	353	-349	-192	-307	41	-52	-54	-8	-90	12,426
Hispanic*	F	-66	195	253	-73	1,537	1,656	897	666	265	-135	-13	-186	45	-100	-85	-100	452	5,207
	M	-140	654	397	738	2,496	1,793	1,153	1,194	466	-32	56	29	184	-30	-1	55	432	9,443
	T	-206	850	650	665	4,033	3,449	2,050	1,860	732	-168	43	-158	228	-130	-87	-45	885	14,651
County	F	3,215	4,335	3,847	5,186	17,492	19,166	13,269	12,451	7,223	2,585	2,263	3,095	8,493	6,754	3,750	958	1,056	115,138
	M	2,921	4,635	3,915	8,105	20,227	22,531	15,069	14,767	9,375	3,741	3,934	3,717	7,635	8,648	5,530	2,042	262	137,054
	T	6,137	8,970	7,761	13,291	37,719	41,697	28,338	27,218	16,598	6,326	6,197	6,812	16,129	15,402	9,280	3,000	1,318	252,193

Source: Applied Economics, 2001.

* Hispanic persons are included in all races.

FIGURE 4-16
NET MIGRATION
MARICOPA COUNTY, 1985-90

		Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
White	F	6,274	5,922	3,498	5,076	5,701	14,600	12,056	5,555	5,741	3,515	2,405	1,197	4,513	7,282	4,703	3,050	1,287	92,375
	M	7,538	7,421	3,926	5,153	6,149	14,259	11,938	3,225	4,575	1,674	260	1,320	3,407	5,758	2,890	1,712	593	81,798
	T	13,811	13,343	7,424	10,229	11,849	28,860	23,993	8,780	10,316	5,188	2,665	2,517	7,920	13,040	7,593	4,762	1,880	174,173
Black	F	261	597	240	201	393	641	608	461	130	94	297	105	233	251	93	118	125	4,847
	M	2	629	288	523	214	710	663	499	502	174	-27	162	183	45	47	29	-12	4,632
	T	263	1,226	528	724	608	1,352	1,271	960	632	268	269	267	416	296	140	147	113	9,480
American Indian	F	309	184	472	364	676	965	620	339	195	99	167	138	82	102	6	69	109	4,894
	M	342	518	317	157	622	608	512	-6	166	173	21	121	61	23	110	5	90	3,840
	T	651	702	789	521	1,297	1,572	1,131	333	361	271	188	259	143	125	117	74	199	8,734
Asian	F	327	227	111	282	506	736	823	621	277	411	117	100	77	116	50	16	2	4,798
	M	370	169	244	602	737	508	565	380	114	141	123	-3	145	113	-40	1	22	4,191
	T	697	396	355	884	1,243	1,244	1,388	1,001	391	551	240	97	222	230	10	17	23	8,989
Other	F	714	432	269	271	1,071	1,597	619	-64	-360	-426	-303	-161	29	-234	-84	-86	-97	3,185
	M	711	1,015	494	1,010	1,192	1,687	300	82	-548	-577	-136	-259	-132	-153	-245	-52	153	4,543
	T	1,425	1,447	763	1,281	2,263	3,284	919	18	-907	-1,003	-440	-421	-103	-387	-329	-138	56	7,728
Hispanic*	F	3,165	2,232	2,687	3,200	4,169	5,305	3,369	1,940	1,261	557	134	282	666	402	395	203	-21	29,945
	M	2,547	4,061	2,638	3,542	5,148	5,849	3,301	2,109	1,262	108	473	111	489	235	-7	107	79	32,050
	T	5,711	6,293	5,325	6,742	9,316	11,154	6,671	4,049	2,522	664	607	393	1,155	637	388	310	57	61,995
County	F	7,884	7,362	4,590	6,194	8,347	18,539	14,726	6,912	5,982	3,691	2,682	1,379	4,933	7,517	4,768	3,166	1,427	110,099
	M	8,964	9,751	5,269	7,445	8,914	17,772	13,977	4,180	4,809	1,585	241	1,341	3,665	5,786	2,763	1,696	846	99,005
	T	16,847	17,114	9,860	13,640	17,260	36,312	28,703	11,092	10,792	5,276	2,924	2,720	8,598	13,303	7,531	4,862	2,272	209,104

Source: Applied Economics, 2001.

* Hispanic persons are included in all races.

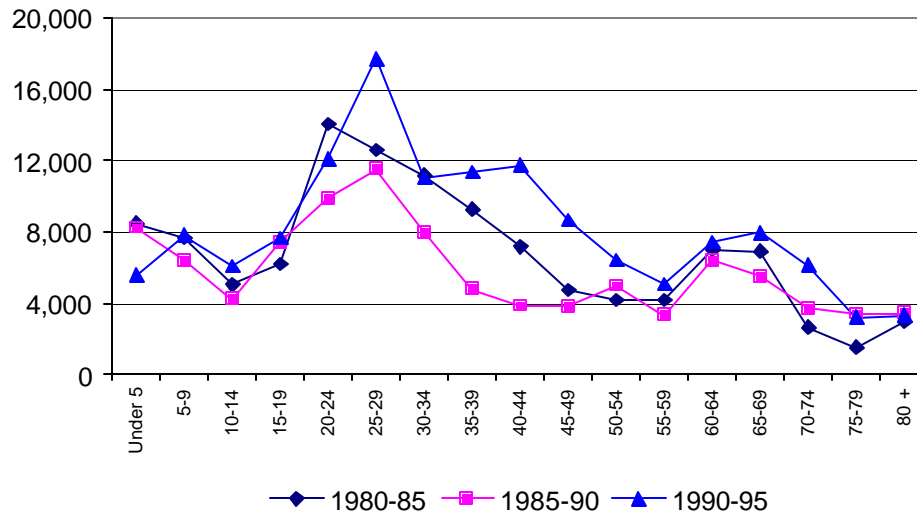
FIGURE 4-17
NET MIGRATION
MARICOPA COUNTY, 1990-95

		Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
White	F	4,119	7,758	6,840	5,467	9,713	13,861	15,815	15,627	11,742	10,065	5,636	3,263	4,001	7,130	8,072	3,383	1,765	134,258
	M	12,225	18,429	16,678	14,244	12,526	15,003	12,651	11,637	8,044	7,458	4,953	2,907	4,270	6,665	7,446	4,704	4,015	163,854
	T	16,343	26,187	23,518	19,711	22,239	28,864	28,466	27,264	19,786	17,523	10,589	6,169	8,271	13,795	15,518	8,087	5,781	298,112
Black	F	83	366	222	241	404	639	722	836	445	209	-18	-20	20	48	-15	-29	38	4,191
	M	514	1,188	817	897	545	754	800	856	553	266	155	226	236	153	150	105	220	8,434
	T	597	1,554	1,039	1,138	949	1,394	1,522	1,692	998	475	137	205	256	201	135	75	258	12,625
American Indian	F	-11	243	24	109	410	14	97	25	-96	22	-26	-53	-53	-52	55	18	135	861
	M	-29	327	175	294	492	256	81	162	70	84	29	29	32	79	51	89	166	2,386
	T	-41	570	199	403	902	271	177	186	-27	107	3	-24	-21	27	106	107	301	3,247
Asian	F	359	408	400	449	1,120	1,004	862	637	564	409	110	78	159	109	64	29	77	6,839
	M	456	566	625	652	1,022	795	444	373	363	268	213	120	124	37	90	60	112	6,319
	T	815	974	1,025	1,100	2,142	1,799	1,305	1,010	927	677	323	198	283	147	155	89	189	13,158
Other	F	898	695	-235	239	1,785	1,217	304	44	-202	-248	-155	-139	1	43	-3	-50	97	4,294
	M	888	1,342	500	1,175	2,251	1,600	413	-182	-255	-229	-194	-131	-37	106	156	58	338	7,798
	T	1,786	2,037	265	1,414	4,036	2,817	717	-138	-457	-477	-348	-270	-35	149	153	8	435	12,092
Hispanic*	F	3,472	6,166	4,866	5,284	8,475	7,897	6,509	4,841	2,827	1,442	1,007	442	485	430	202	96	542	54,983
	M	6,297	8,423	6,448	8,306	10,109	9,223	6,687	4,525	2,842	1,704	1,061	634	492	714	739	446	847	69,497
	T	9,770	14,589	11,314	13,590	18,584	17,120	13,196	9,367	5,669	3,146	2,068	1,076	976	1,144	940	542	1,389	124,480
County	F	5,447	9,470	7,252	6,506	13,433	16,736	17,799	17,170	12,452	10,458	5,547	3,128	4,128	7,278	8,174	3,351	2,112	150,441
	M	14,053	21,852	18,795	17,261	16,836	18,408	14,389	12,845	8,774	7,847	5,156	3,150	4,626	7,041	7,892	5,016	4,852	188,792
	T	19,500	31,322	26,046	23,767	30,268	35,144	32,188	30,014	21,227	18,305	10,703	6,278	8,754	14,319	16,066	8,367	6,963	339,233

Source: Applied Economics, 2001.

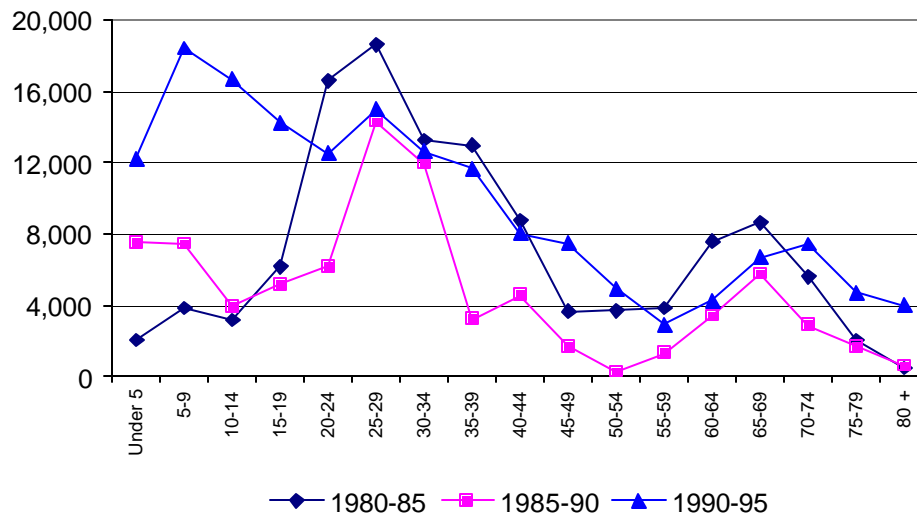
* Hispanic persons are included in all races.

FIGURE 4-18
NET MIGRATION, WHITE FEMALES
MARICOPA COUNTY



Source: Applied Economics, 2001.

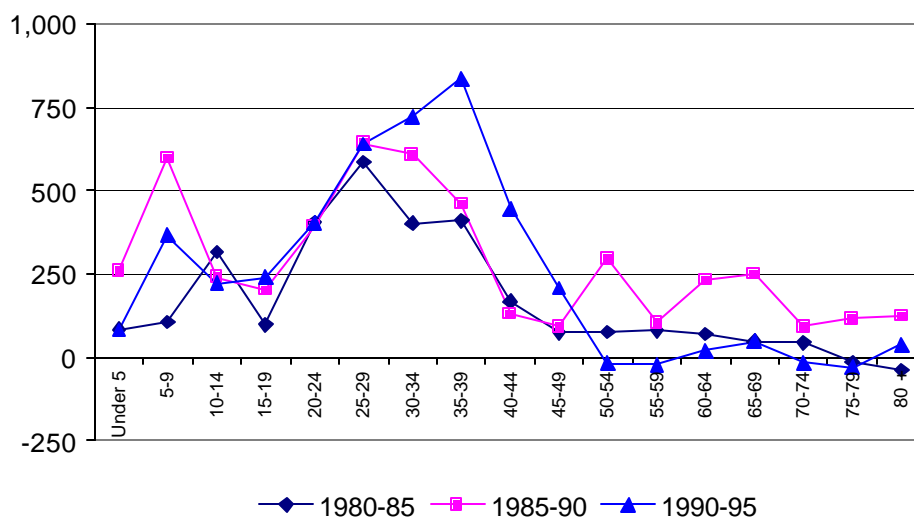
FIGURE 4-19
NET MIGRATION, WHITE MALES
MARICOPA COUNTY



Source: Applied Economics, 2001.

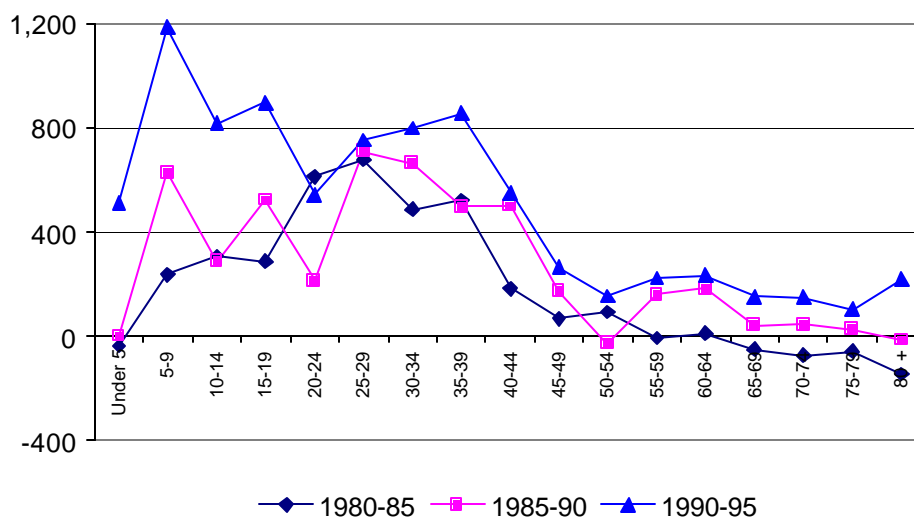
The net migration of the American Indian and Black racial groups reflect more erratic trends than the White (**Figures 4-20 through 4-23**) primarily due to small population bases. Net migration among the Black population was highest during the 1990-95 period. Net American Indian migration was highest during the 1985-90 period, although quite erratic across the age groups perhaps suggesting the temporal characteristics of migration since 1980. Note the absolute migration totals for these races are well below the White migration; in 1990-95, the largest growth for the Black and Indian populations peaked at 12,600 and 8,700, respectively while the White population netted almost 300,000. The difference in size also contributes to the unevenness of the trend lines. Finally, both these minority groups had a sharp increase in net migration of 20-35 year old females in all time periods.

FIGURE 4-20
NET MIGRATION, BLACK FEMALES
MARICOPA COUNTY



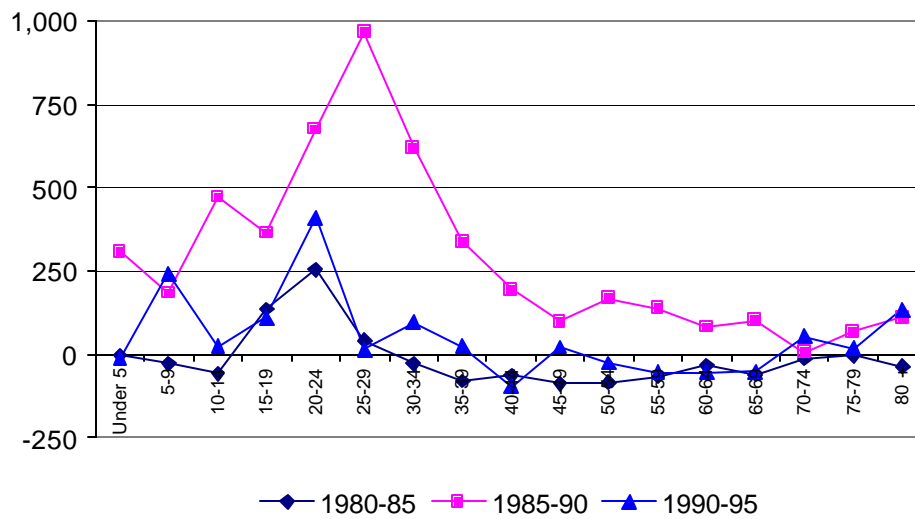
Source: Applied Economics, 2001.

FIGURE 4-21
NET MIGRATION, BLACK MALES
MARICOPA COUNTY



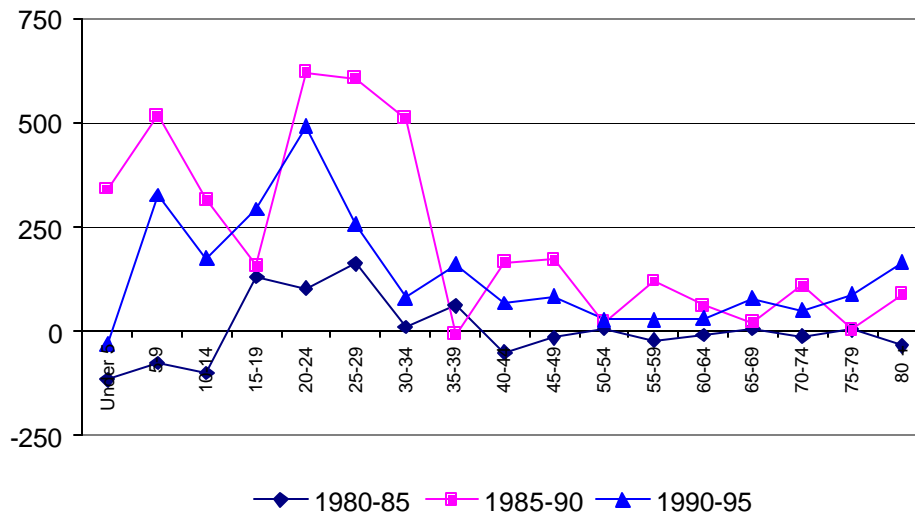
Source: Applied Economics, 2001.

FIGURE 4-22
NET MIGRATION, AMERICAN INDIAN FEMALES
MARICOPA COUNTY



Source: Applied Economics, 2001.

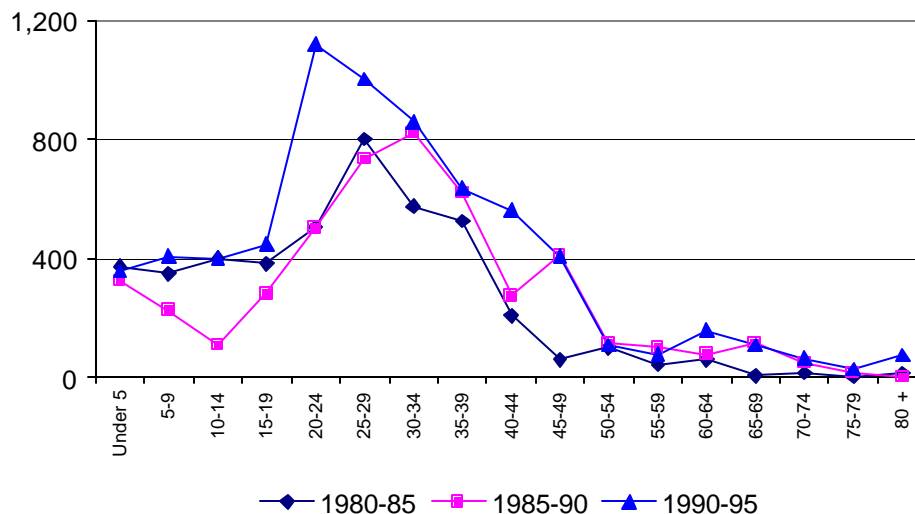
FIGURE 4-23
NET MIGRATION, AMERICAN INDIAN MALES
MARICOPA COUNTY



Source: Applied Economics, 2001.

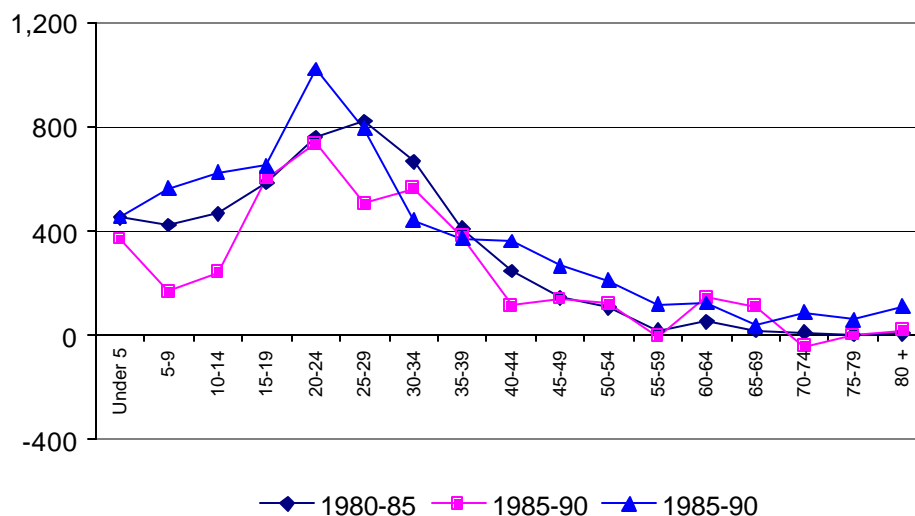
Net migration of the Asian and Other race groups shows smoother curves across the age groups (**Figures 4-24 through 4-27**). These races reflect general countywide trends of higher immigration of the working age cohorts. In these groups however, net migration appears to taper off after the working ages, suggesting that there is not a great deal of retirement immigration to Maricopa County especially among the Other race. Finally, net migration in absolute terms for all the non-White groups is considerably lower than net migration of the White population over this period, consistent with the largely White composition of the population in Maricopa County.

FIGURE 4-24
NET MIGRATION, ASIAN FEMALES
MARICOPA COUNTY



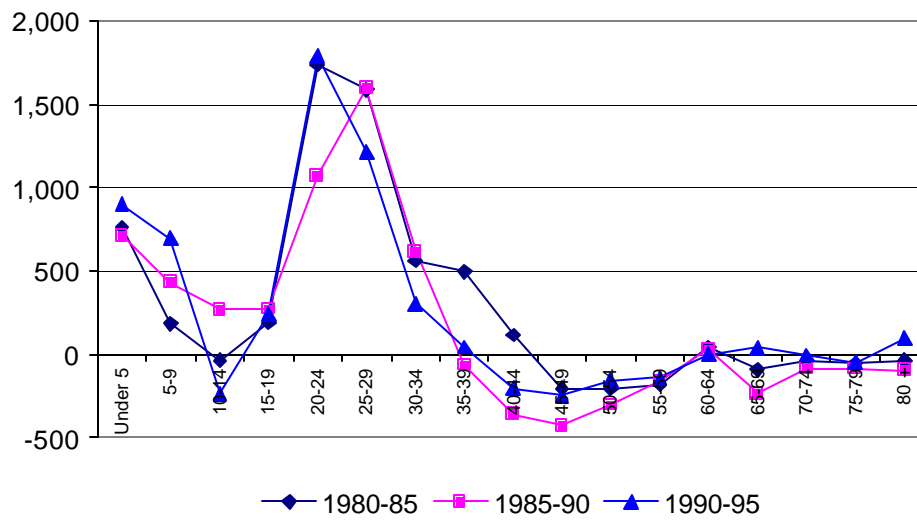
Source: Applied Economics, 2001.

FIGURE 4-25
NET MIGRATION, ASIAN MALES
MARICOPA COUNTY



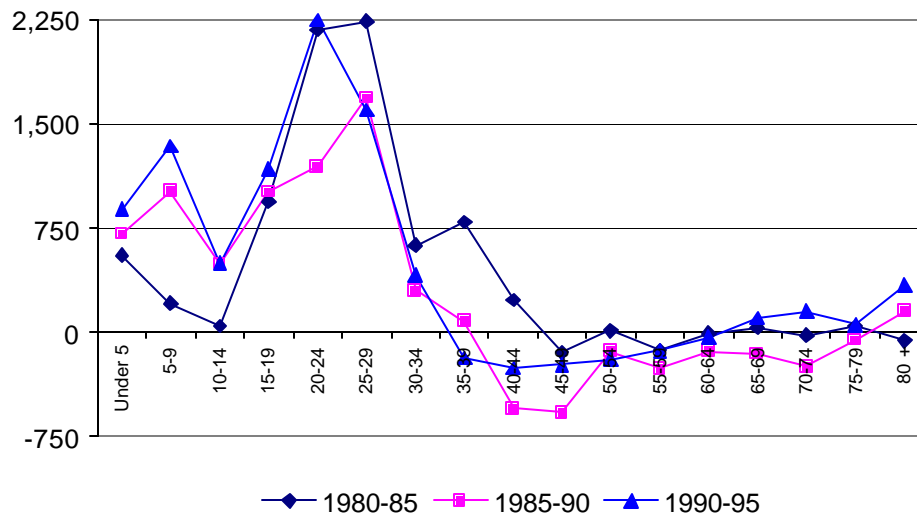
Source: Applied Economics, 2001.

FIGURE 4-26
NET MIGRATION, OTHER FEMALES
MARICOPA COUNTY



Source: Applied Economics, 2001.

FIGURE 4-27
NET MIGRATION, OTHER MALES
MARICOPA COUNTY



Source: Applied Economics, 2001.

4.3.2 Hispanic Migration and Demographic Trends

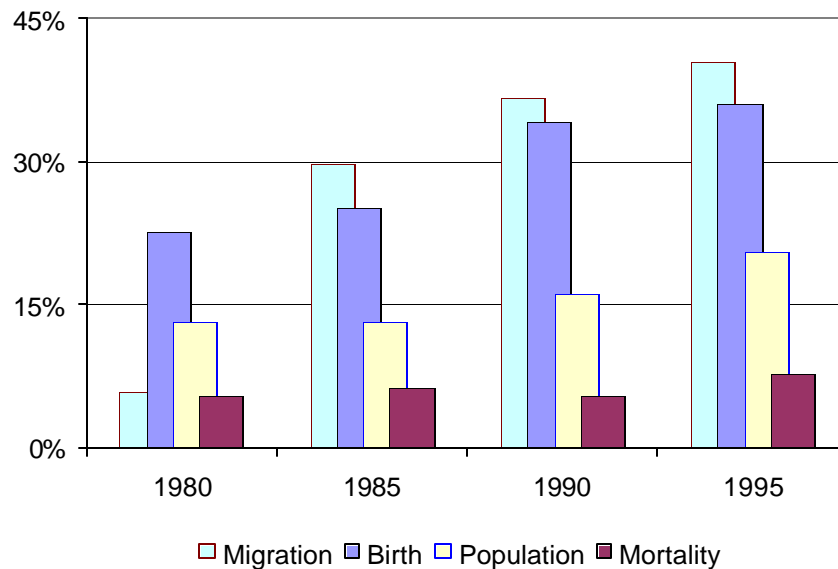
Due to the dynamics of the growing Hispanic population in Maricopa County as well as the unique demographic structure, it is worthwhile analyze the population, natality, mortality, and migratory characteristics of this group. *One of the more interesting findings of this study is a noticeably low amount of Hispanic deaths and high amount of Hispanic births compared to those of the population as a whole (Figure 4-28).* From the census data, it is observed that the Hispanic population grew from approximately 13 percent of the population in 1980 to about 20 percent in 1995. The early results of the 2000 Census indicate a large increase to about 25 percent. However, for those same years the Hispanic births and deaths did not occupy the same share of the population. **Figure 4-29** shows the graphic representation of that data.

FIGURE 4-28
HISPANIC SHARE OF TOTAL POPULATION
MARICOPA COUNTY

	1980	1985	1990	1995
Births	22.67%	25.16%	34.20%	36.11%
Population	13.19%	13.21%	16.03%	20.48%
Deaths	5.47%	6.23%	5.39%	7.69%
Migration	5.81%	29.65%	36.69%	40.48%

Sources: U.S. Census Bureau, 1980-1995; Arizona Department of Health Services, 1979-1996; Applied Economics, 2001.

FIGURE 4-29
HISPANIC SHARE OF TOTAL POPULATION
MARICOPA COUNTY



Sources: U.S. Census Bureau, 1980-1995; Arizona Department of Health Services, 1979-1996; Applied Economics, 2001.

Hispanic births as a share of total births are much higher than the Hispanic share of the population, almost twice as high in most years, whereas the mortality share is less than half of the population share. In some years, Hispanic births more than doubled the census count of Hispanics under one year old. This might be a reflection that Hispanic women in Maricopa County have more children than non-Hispanic women, or that Hispanic women come to the area to have children and leave afterward. Regardless of the cause, more Hispanics are being born in Maricopa County than live there, and the opposite holds for mortality since Hispanics do not appear to die in Maricopa County in proportion with the population. Another factor may be the undercount of the Hispanic population by the Census. The Census is often accused of undercounting minority populations, especially Hispanics who may not respond to Census questionnaires for fear of possible legal repercussions of their resident status. However, even assuming a possible undercount, the proportions of births and deaths do not correspond to the size of the population.

Post-1985 Hispanic migration accounts for an increasing share of total migration to Maricopa County, topping 40 percent in 1990-95 (Figure 4-30). This increase could be tied to the devastating 1985 earthquake in Mexico and the two successive economic crises during the mid 1980's. The devaluation of the peso in December of 1994 and the subsequent recession caused major emigration from Mexico to the United States as economic conditions worsened for all economic classes and sectors. The high share of migration and low proportion of deaths may be an indicator of the mobility of this ethnic group, suggesting that immigration to the area is temporary once economic stability is accomplished. However, a more likely scenario suggests a pending surge in the Hispanic population in Maricopa County, which has just recently begun, and is likely to continue increasing even more so the Hispanic presence.

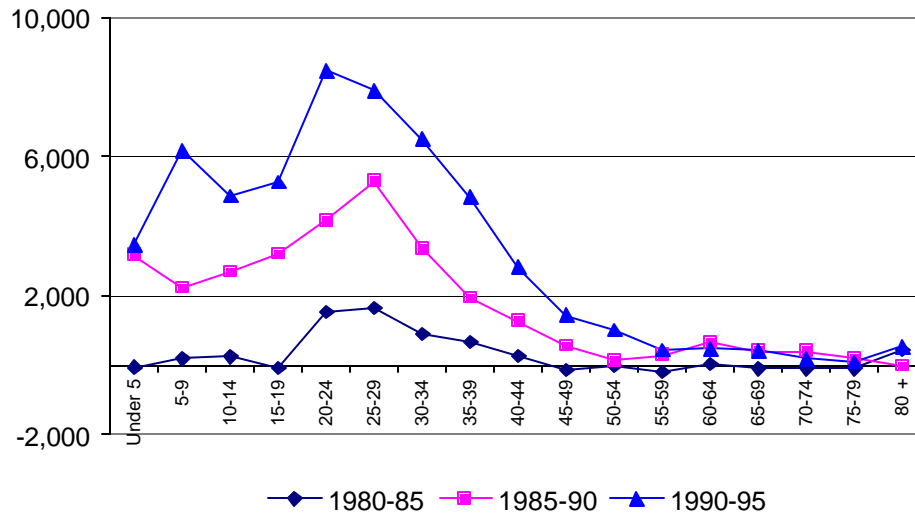
FIGURE 4-30
HISPANIC MIGRATION
AS PERCENTAGE OF TOTAL
MARICOPA COUNTY

Year	Gender	Total
1980-85	Female	4.52%
	Male	6.89%
	Total	5.81%
1985-90	Female	27.20%
	Male	32.37%
	Total	29.65%
1990-95	Female	36.55%
	Male	36.81%
	Total	36.69%

Source: Applied Economics, 2001.

Migratory movements among the Hispanic male and female population indicate the changing demographics of the Hispanic migrants as well as the total population (**Figures 4-31 and 4-32**). Net Hispanic migration has increased drastically from 1980-85 through the 1990-95 time period. From 1980 to 1985, total Hispanic net migration totaled less than 15,000 people. Ten years later, Hispanic migration totaled over 124,000 people. Early Census figures indicate 1995-2000 net migration to be well above these previous periods.

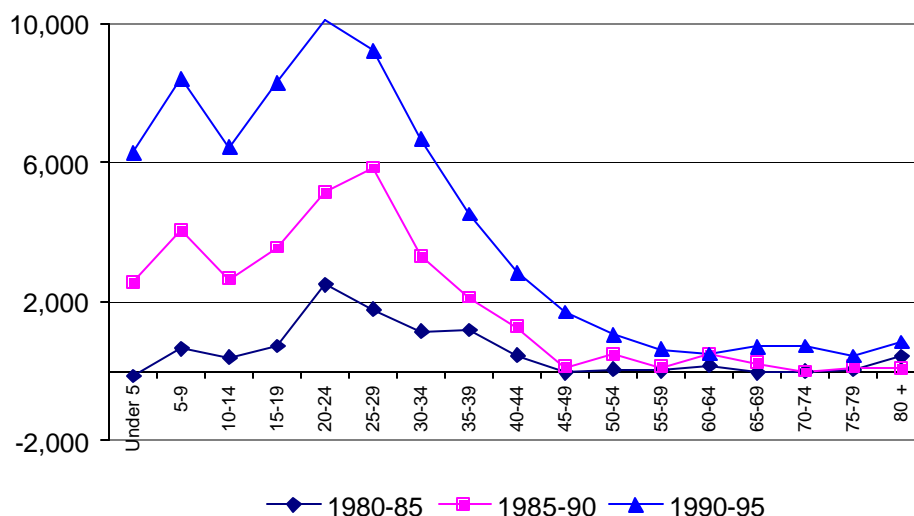
FIGURE 4-31
NET MIGRATION, HISPANIC FEMALES
MARICOPA COUNTY



Source: Applied Economics, 2001.

In general, the male Hispanic population had much higher migration totals than females in the 1980 to 1985 period. This likely reflects the migrant worker trend, where young male laborers from Mexico work in the United States on a temporary basis sending money home to the family, and then returning to Mexico after the work season had ended. This trend has been changing over time because of sustained difficult economic conditions in Latin American countries and a stable, growing economy in the United States. When economic hardships came about in Latin America during the late 1970's ending decades of state-induced industrial growth, politicians and economists referred to recessions as short-term. This promulgated a revival in migrant worker tendencies, when only the young men and fathers would emigrate to the United States for a temporary period intending to return home once economic conditions improved. Prolonged recovery and recession have since become endemic to most Latin American countries and families can no longer seek short-term fixes to their economic situation. Many working class families choose to migrate to the United States on a more long-term or even permanent basis. Maricopa County reflects this trend as Hispanic migration since 1985 includes more working age females, as well as children of both sexes. Total female Hispanic migration grew nine fold over the 15-year period, while male migration grew by six times.

FIGURE 4-32
NET MIGRATION, HISPANIC MALES
MARICOPA COUNTY



Source: Applied Economics, 2001.

The Hispanic immigrant population also became younger during this time period. In the period between 1980 and 1985, Hispanic children and teenagers composed approximately 13 percent of total Hispanic migration. From 1985 through 1990, this young people's share rose to about 38 percent. At the same time, the share of Hispanic migrant population over age 49 has not grown significantly over the period, hovering around 6 percent of the total Hispanic migrant population. Again, this points to the trend that few minority elderly relocate to Arizona, especially Hispanic. The Hispanic share of mortality in Maricopa County suggests that people actually leave the area as they age, or at least before they die. However, as more Hispanic families relocate to Maricopa County on a permanent basis and form community ties, there is likely to be a larger presence of Hispanics past prime working age.

4.4 CONCLUSIONS

Population growth in Maricopa County since 1980 has primarily been spurred by migration. Domestic immigrants have most often come from California, Texas, and Illinois while there is a good deal of migratory movement between Maricopa County, Tucson, Las Vegas, and Southern California cities. The majority of the international immigrants originate from Mexico, although the legal and illegal immigrant population may be smaller than locally perceived. The majority of the net migration during the 1980's and 1990's consisted of White and Hispanic population. Migration has been strong for working age females in all race groups while the majority of retiree migrants are White. The Hispanic migration to the area accounts for an increasingly larger portion of the migration population, a reflection of the growing and broadening Hispanic community both regionally and nationwide.

5.0 EDUCATION AND LABOR FORCE CHARACTERISTICS

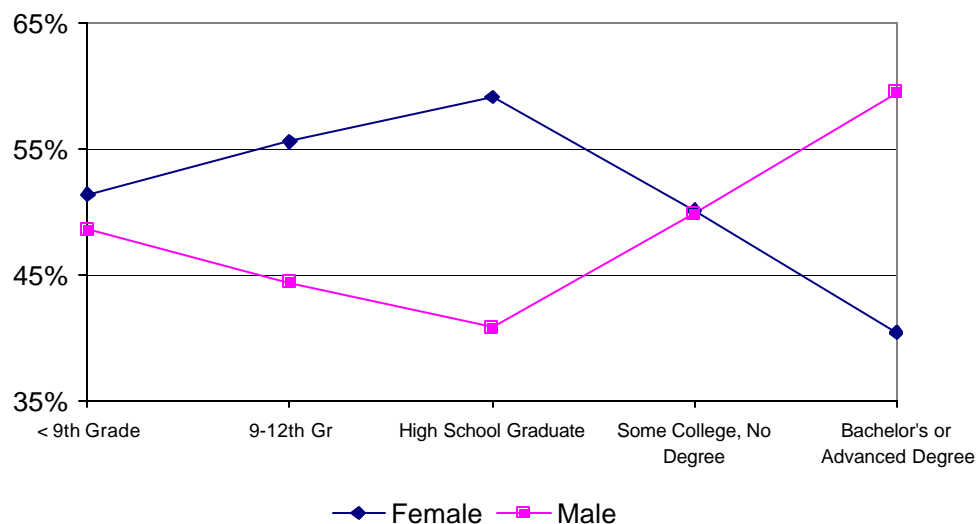
This chapter presents additional data derived from the Census that provides further insight into the nature of the population, and specifically labor force, of Maricopa County in 1980 and 1990. Educational attainment and labor force status data by race and were used as the basis for this analysis. The first section contains historic data on educational attainment of the population and the second section presents a literature review of national trends in labor force participation, historic labor force data for Maricopa County and the United States, as well as projected labor force by age, race and gender for Maricopa County.

5.1 EDUCATION

Data concerning educational attainment was collected from the 1980 and 1990 decennial Censuses only, since neither special census includes such detail. Summary Tape Files (STF's) provided the data about the education attainment of persons ages 25 and over categorized by gender as well as race and Hispanic origin in Maricopa County. The Public Use Microdata Sample (PUMS) data for the Census, which are based on sampling, were used to allocate the totals across genders. Due to the changing trends in education, lower high school drop out rates, and the proliferation of community colleges and technical schools, the categories from 1980 and 1990 differ slightly. **Figures 5-2 and 5-3** show the educational attainment by race or Hispanic origin by sex for 1980 and 1990, respectively.

The data on educational attainment may reveal some social characteristics of the population as a whole. *Over the ten-year period, the share of the population age 25 and over that did not hold a high school diploma declined from about 25 to 19 percent. As reflected in Figures 5-1 and 5-4, the female population composed a greater share of the population with elementary, secondary, and high school education, in both 1980 and 1990. In 1990, the female population more often had some college or an Associate's degree than did their male counterparts. However, females composed a lesser share of the population with a Bachelor's, professional, or graduate degree, which is not all that surprising considering historical trends in education and women's traditional role as the family caretaker.*

FIGURE 5-1
EDUCATIONAL ATTAINMENT BY GENDER
PERCENT OF TOTAL IN EACH EDUCATIONAL GROUP 1980



Sources: U.S. Bureau of the Census, 1980; Applied Economics, 2001.

FIGURE 5-2
EDUCATIONAL ATTAINMENT OF ALL PERSONS 25 OR OLDER
MARICOPA COUNTY 1980

Race	Sex	Less than 9th Grade	9th - 12th Grade	High School Graduate	Some College or Associate Degree	Bachelor, Graduate or Professional Degree
White	F	43,234	52,149	169,665	90,026	61,916
	M	41,043	41,105	115,297	88,301	90,953
	T	84,277	93,254	284,962	178,327	152,869
Black	F	2,377	2,220	3,438	2,166	1,066
	M	2,234	1,947	3,025	2,623	1,304
	T	4,611	4,167	6,463	4,789	2,370
American Indian	F	1,072	1,105	1,423	1,048	315
	M	1,001	680	1,265	891	436
	T	2,073	1,786	2,688	1,939	751
Asian	F	851	322	1,325	750	812
	M	467	221	591	627	1,320
	T	1,318	543	1,916	1,377	2,132
Other	F	10,494	3,677	5,880	2,280	1,136
	M	10,115	3,566	5,329	3,334	1,862
	T	20,609	7,243	11,210	5,613	2,998
Hispanic*	F	17,967	6,390	11,249	4,008	1,882
	M	16,955	5,982	9,117	6,207	3,107
	T	34,922	12,372	20,366	10,215	4,989
County	F	58,028	59,474	181,731	96,269	65,245
	M	54,860	47,519	125,507	95,776	95,875
	T	112,888	106,993	307,238	192,045	161,120

Sources: U.S. Census Bureau, 1980; Applied Economics, 2001.

* Hispanic persons are included in all races.

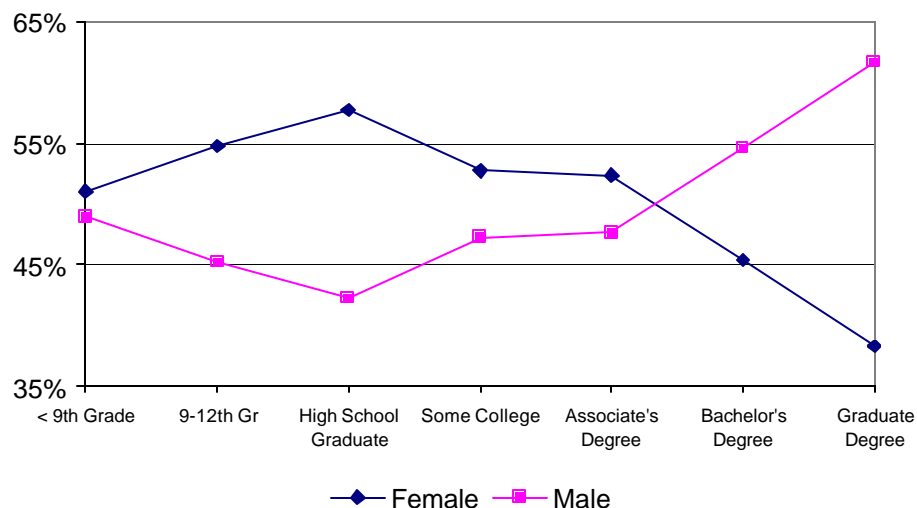
FIGURE 5-3
EDUCATIONAL ATTAINMENT OF ALL PERSONS 25 OR OLDER
MARICOPA COUNTY 1990

Race	Sex	Less than 9th Grade	9th-12th Grade	High School Graduate	Some College No Degree	Associates' Degree	Bachelor's Degree	Grad or Prof Degree
White	F	32,525	67,692	179,988	172,304	46,231	85,679	34,400
	M	31,849	54,970	128,148	153,427	41,723	103,181	55,025
	T	64,374	122,662	308,136	325,731	87,954	188,860	89,425
Black	F	1,633	3,455	4,163	6,127	1,686	2,113	784
	M	1,789	2,867	4,429	5,890	1,717	1,999	981
	T	3,422	6,322	8,592	12,017	3,403	4,112	1,765
Am Ind	F	1,398	2,007	2,796	2,548	607	403	194
	M	789	1,807	2,189	1,949	641	536	267
	T	2,187	3,814	4,985	4,497	1,248	939	461
Asian	F	1,574	1,382	2,154	1,841	785	2,158	1,023
	M	628	636	1,057	1,690	793	2,554	2,298
	T	2,202	2,018	3,211	3,531	1,578	4,712	3,321
Other	F	13,382	7,464	8,475	6,233	1,655	1,149	463
	M	13,442	7,525	8,856	6,607	1,558	1,677	689
	T	26,824	14,989	17,331	12,840	3,213	2,826	1,152
Hispanic	F	24,432	14,923	19,088	14,599	3,784	3,879	1,320
	M	25,003	13,503	15,267	12,645	3,572	3,959	2,338
	T	49,435	28,426	34,355	27,244	7,356	7,838	3,658
County	F	50,512	81,999	197,576	189,053	50,963	91,501	36,864
	M	48,497	67,806	144,679	169,563	46,433	109,948	59,260
	T	99,009	149,805	342,255	358,616	97,396	201,449	96,124

Sources: U.S. Census Bureau, 1995; Applied Economics, 2001.

* Hispanic persons are included in all races.

FIGURE 5-4
EDUCATIONAL ATTAINMENT BY GENDER
PERCENT OF TOTAL IN EACH EDUCATIONAL GROUP 1990

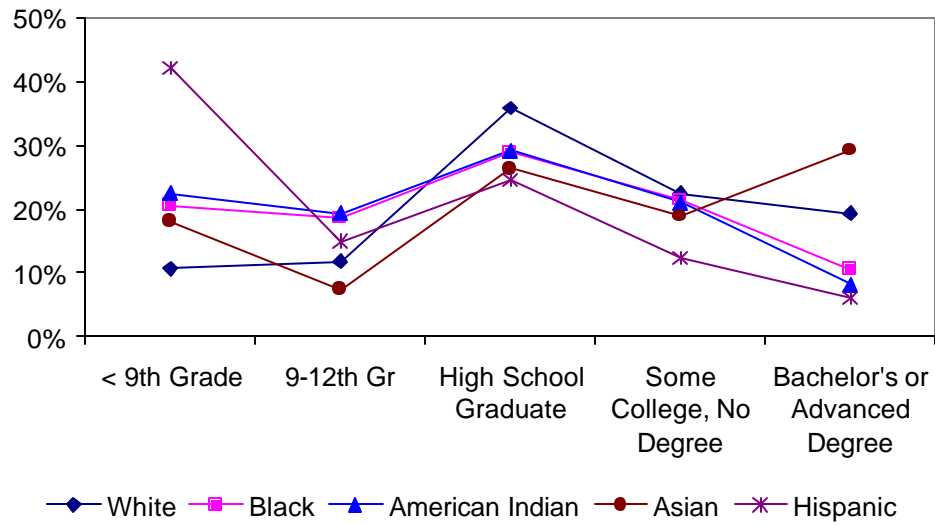


Sources: U.S. Bureau of the Census, 1990; Applied Economics, 2001.

Similarly, educational attainment across the races does not reveal many characteristics that differ dramatically from national and historical trends. **Figures 5-5 and 5-6** show the educational achievement of population by race in 1980 and 1990, respectively. *In all races, the 1980 Census revealed a much higher share of population with only an elementary education than in 1990. By 1990, there is a notable shift across all the races towards higher education as “some college” replaced “high school graduate” as the category with the highest share in every race except Asian, where those with Bachelor’s degrees are the single largest category.* This is likely due to the growth, proliferation, and accessibility of community colleges and technical trade schools across the United States.

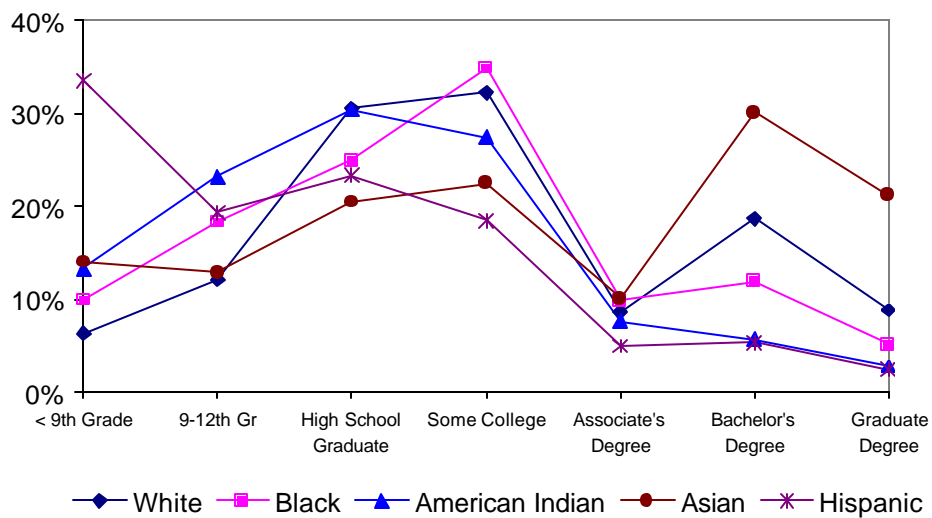
The Censuses reveal a very educationally diverse Asian population in Maricopa County. **Figure 5-7** compares White and Asian educational attainment as percents of the total. On one hand, the Asian cohort has the largest share of college graduates than any other race. But, it is particularly interesting to note that a significant percent of its population, 14 and 18 percent in 1980 and 1990, had a less than elementary school education. This probably suggests that among the Asian population in Maricopa County, there is a number over age 25 who were born and educated in third world areas of Asia, where it is not uncommon to only attend a few years of formal schooling.

FIGURE 5-5
EDUCATIONAL ATTAINMENT BY RACE
PERCENT OF TOTAL IN EACH RACE 1980



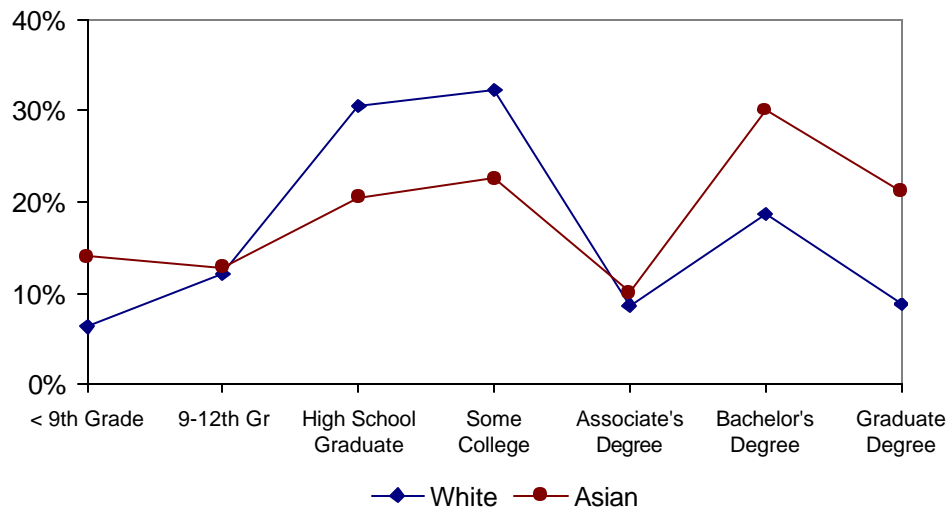
Sources: U.S. Bureau of the Census, 1980; Applied Economics, 2001.

FIGURE 5-6
EDUCATIONAL ATTAINMENT BY RACE
PERCENT OF TOTAL IN EACH RACE 1990



Sources: U.S. Bureau of the Census, 1990; Applied Economics, 2001.

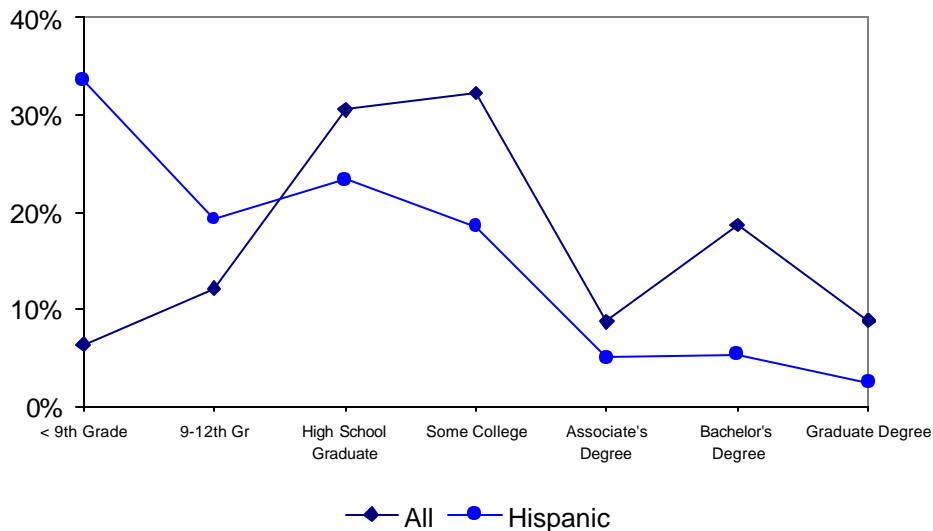
FIGURE 5-7
EDUCATIONAL ATTAINMENT, ASIAN AND WHITE
PERCENT OF TOTAL IN EACH RACE 1990



Sources: U.S. Bureau of the Census, 1990; Applied Economics, 2001.

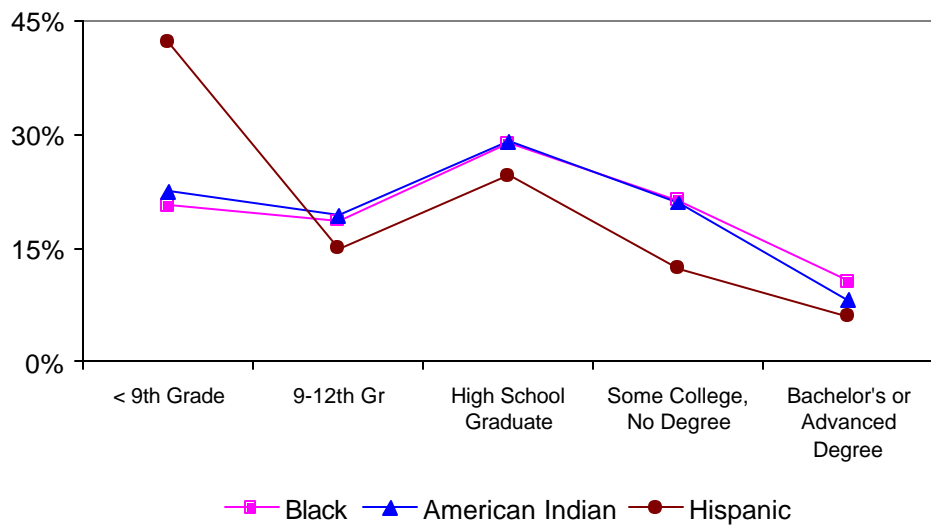
The data on educational attainment also shows intriguing characteristics of the Hispanic population in Maricopa County during this period. *More than a third of the Hispanic population in 1990 had less than nine years of schooling while over half of the Hispanic population did not have at least a high school diploma (Figure 5-8).* Although Hispanics are considered a disadvantaged minority, they have much poorer education levels than other disadvantaged minorities (Figures 5-9 and 5-10).

FIGURE 5-8
HISPANIC EDUCATIONAL ATTAINMENT
PERCENT OF TOTAL 1990



Sources: U.S. Bureau of the Census, 1990; Applied Economics, 2001.

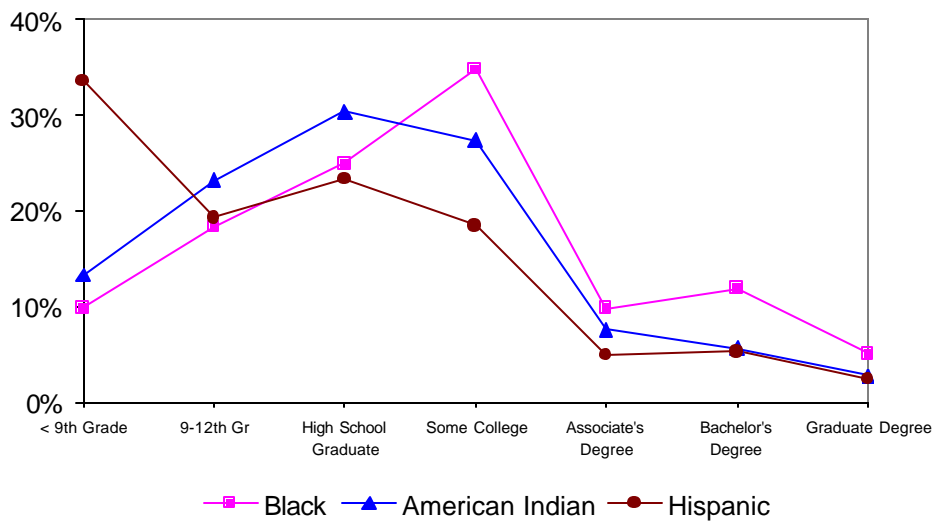
FIGURE 5-9
EDUCATIONAL ATTAINMENT, SELECT GROUPS
PERCENT OF TOTAL 1980



Sources: U.S. Bureau of the Census, 1980; Applied Economics, 2001.

It is interesting to note the significant change in educational attainment of the Black population. *The percentage of Blacks without a high school diploma composed of a significantly lower share in 1990—28 percent down from 39 percent in 1980. The share of the American Indian population without a High School diploma dropped from 42 percent to 33 percent over the same period.* This reflects nationwide trends to increase the level of compulsory education among minority groups.

FIGURE 5-10
EDUCATIONAL ATTAINMENT, SELECT GROUPS
PERCENT OF TOTAL 1990



Sources: U.S. Bureau of the Census, 1980; Applied Economics, 2001.

This trend is not reflected in the Hispanic population, with the percent of the population not obtaining a high school diploma declining but only from 57 percent down to 53 percent. It is unlikely that the Hispanic population who received education in the United States did not experience declines similar to those of the other disadvantaged minorities. It is more likely that Hispanics who are educated here in the United States have much higher levels of educational attainment than do those who are educated abroad. This suggests that a large portion of that population was also educated abroad; most likely in Latin American countries where economic and social conditions reduce the average number of years one spends in formal schooling. This information points to the possibility that the Phoenix metropolitan area attracts poorer, less educated Latin Americans than perhaps other cities, such as Washington D.C. or Miami that tend to draw political refugees or entrepreneurs, those with generally higher education levels. However, it is reasonable to assume that the Hispanic population will over time become more educated as an increased percentage of Hispanic children are born, educated, and live their lives in the United States.

5.2 LITERATURE REVIEW ON LABOR FORCE PARTICIPATION

Most of the current projections of labor force participation by age and gender are at the national level. The literature describes major demographic trends, such as the aging of the baby boomers that will impact participation rates for various age cohorts over time.

5.2.1 Historical Trends in Labor Force Participation

Between 1970 and 1990, the labor force participation rate in the United States increased from 60.4 percent to 66.4 percent for non-institutional population over 16. This significant increase can be attributed to two major factors. First, this period was when most of the baby boom generation entered the labor force. Second, the participation rate for women increased 14.2 percentage points.

The baby boom generation, which includes persons born between 1946 and 1964, was a driving factor in the increasing size of the labor force, as well as in labor force participation rates over the last thirty to forty years. The previous generation born during the 1930's and early 1940's was part of the birth dearth era. This smaller population aged and was overshadowed by the large number of baby boomers entering the labor force. As a result of the baby boomers, the median age of the labor force has decreased from 40.5 years in 1962, to 34.8 in 1978, and then began a long-term climb back upward. By 2008, the median age is projected at 40.7 years.¹

The past forty years represent a period of dramatic change in terms of the role of women in the work place. Increases in real wages and market opportunities for women have resulted in increased labor force participation rates. In 1950, labor force participation rates for women ranged from a high of 43.9 percent of 16 to 24 year olds to a low of 27 percent for 55 to 64 year olds. During the post-war period, social acceptance of women, and particularly married women, in the workforce began to take hold. At the same time, the increase in the number of white-collar jobs increased the demand for women in the workforce who would accept lower paying jobs with limited advancement opportunities. During the 1970's, high inflation and declines in real wages, along with corporate downsizing trends in the 1980's required many families to add second wage earners, usually women.²

In recent years, higher wages and improved career opportunities for women, along with more generous tax treatment of childcare expenses has had a particularly strong impact on women's work status after childbirth³. By 1998, participation rates ranged from 77.1 percent for 35 to 44 year olds, to 51.2 percent

¹ Fullerton, Howard, Fullerton, Howard. "Labor Force Projections to 2008: Steady Growth and Changing Composition" Monthly *Labor Review*, November 1999

² Steffes, Edward J., "Labor Force Participation by Sex." FamilyDiscussions.com, September 2000.

³ Shapiro, David. "Fertility, Child Care and Labor Force Participation" Pennsylvania State University, Department of Economics, 1997.

for 55 to 64 year olds (**Figure 5-11**). Participation rates increased significantly for all age groups of women, but the most dramatic increases were for women between the ages of 25 and 54 where participation rate rose by 38 to 42 percent.⁴ Of the 63.7 million employed women in 1998, about 74 percent worked full time and nearly 4 million held more than one job.⁵

Unlike the increasing participation rates for women, rates for men decreased overall from 1950 to 1998 for all age groups. The most significant changes were for men aged 55 to 64, although the overall participation rate for men 16 and older declined 11.5 percentage points. In 1955, nearly 45 percent of men age 65 and older still worked, but today only about 16 percent are still in the labor force. The participation rates for both men and women begin to decline rapidly above age 54.⁶ Some of this decline can be linked to the Social Security Act, which was amended in 1960 to make workers under age 50 eligible for disability payments. In 1961, workers over age 62 became eligible for early retirement benefits. Then in the 1970s, Social Security payments were over-adjusted for cost of living increases, causing a notable decline in labor force participation for men over 65.⁷

Another contributing factor in the decline of men's participation rates from 1950 to 1980 was the greater availability of pensions and disability awards from employers. Especially during the 1980's when many companies were downsizing, lump-sum payments to older workers to induce early retirement were more common. As a result of these trends, the gap between rates for men and women narrowed from 52.5 percentage points to 15.1 percentage points for workers age 16 and older.⁸

FIGURE 5-11
CHANGE IN LABOR FORCE PARTICIPATION RATES BY AGE AND SEX

Age Group	Female			Male		
	1950	1998	Change	1950	1998	Change
16 and older total	33.9%	59.8%	25.9%	86.4%	74.9%	-11.5%
16 to 24	43.9%	63.3%	19.4%	77.3%	68.4%	-8.9%
25 to 34	34.0%	76.3%	42.3%	96.0%	93.2%	-2.8%
35 to 44	39.1%	77.1%	38.0%	97.6%	92.6%	-5.0%
45 to 64	37.9%	76.2%	38.3%	95.8%	89.2%	-6.6%
55 to 64	27.0%	51.2%	24.2%	86.9%	68.1%	-18.8%
65 and older	9.7%	8.6%	-1.1%	45.8%	16.5%	-29.3%

Source: Bureau of Labor Statistics, *Monthly Labor Review*, December 1999.

Race is also a significant factor in labor force participation rate trends. The Hispanic and Asian proportion of the population grew significantly following changes in immigration laws in the mid-1960's. As a result of these changes, there was a surge of immigration beginning in 1970.⁹ Historically, Hispanic men have had the highest labor force participation rates, although this is largely due to the younger average age of the Hispanic population. Hispanic women have had the lowest participation rates. For Blacks, the opposite is true with black men having the lowest participation rates among men of all races, and black women having the highest participation rates among women.¹⁰

⁴ Fullerton, Howard. "Labor Force Participation: 75 Years of Change, 1950 to 1998 and 1998 to 2025." *Monthly Labor Review*, December 1999.

⁵ National Council on Women's Organizations, "Facts on Women" 1999.

⁶ National Center for Policy Analysis. "The Declining Labor Force Participation of Older Workers." September 1999.

⁷ Fullerton, Howard. December 1999.

⁸ Fullerton, Howard. December 1999.

⁹ Fullerton, Howard, December 1999.

¹⁰ Fullerton, Howard, November 1999.

Until the late 1980's black women aged 30 to 44 had the highest participation rates of all age/sex/race cohorts. During the 1990's the rates for white non-Hispanic women increased and are now similar to those for black women in both the 30 to 44 age group and in older age groups. Younger black women, age 16 to 24 tend to have below average labor force participation, based on data for 1998. Asian women under 45 also have lower participation rates for all age cohorts. This can be partially attributed to higher post-secondary enrollment rates for younger age groups.

For men, labor force participation rates are highest for white non-Hispanic and Hispanic men age 16 to 24, based on estimates for 1998. Participation rates for Asians are lowest for 16 to 24 year olds, again due to higher school enrollment rates. Black men have lower participation rates for all age cohorts than other races.¹¹

In terms of share of the labor force, White non-Hispanics accounted for the largest part of the national labor force, declining slightly from 79 percent in 1988 to 74 percent in 1998. The Asian share of the labor force grew rapidly during this period, but was still only a small part of the total in 1998, increasing from 3.1 to 4.6 percent. The Hispanic labor force also grew from 7.4 to 10.4 percent. The share of blacks in the labor force increased slightly from 10.9 to 11.6 percent.

5.2.2 Projected Labor Force Participation

The Bureau of Labor Statistics (BLS) has developed national projections of labor force participation by age and gender through 2025 (**Figure 5-12**). The projected changes in the composition of the labor force from 1998 to 2025 are based on changes in age, sex and race/ethnic makeup of the general population. Based on differences in growth rates of the population by age and race, the overall composition of the labor force will change, even with participation rates held constant for specific demographic groups.¹²

FIGURE 5-12
PROJECTED U.S. LABOR FORCE PARTICIPATION RATES BY AGE AND SEX

Age	Male				Female			
	1998	2008	2015	2025	1998	2008	2015	2025
16 to 24	68.40%	68.00%	68.90%	68.10%	63.30%	64.30%	65.30%	64.10%
25 to 34	93.20%	93.20%	93.10%	93.00%	76.30%	79.00%	80.50%	80.00%
35 to 44	92.60%	92.30%	92.20%	92.10%	77.10%	80.00%	82.00%	81.90%
45 to 54	89.20%	88.80%	88.40%	88.30%	76.20%	80.00%	82.00%	81.80%
55 to 64	68.10%	69.40%	69.10%	67.70%	51.20%	57.70%	60.80%	58.80%
65 and over	16.50%	17.80%	19.80%	19.10%	8.60%	9.10%	10.30%	9.90%

Source: Bureau of Labor Statistics, Monthly Labor Review, Dec 1999; Applied Economics, 2001.

The total labor force in the United States is expected to increase by about 17 million people from 1998 to 2008, or about 12 percent. This is comparable to the 13 percent increase from 1988 to 1998.¹³ From 2008 to 2025, the nation's labor force will only increase by about 11 million people, or about 7 percent.

During the period from 1998 to 2008, the baby boomers will peak in terms of labor force participation. By 2008, they will be between the ages of 44 and 62. Another interesting trend is the increase in the youth labor force (age 16 to 24), which will grow more rapidly than the labor force overall from 1998 to 2008 for the first time in 25 years. This age group will increase as a share of the overall population, which has not happened since the late 1970's.

¹¹ Fullerton, Howard, December 1999.

¹² Fullerton, Howard, December 1999.

¹³ Fullerton, Howard, November 1999.

The number of labor force participants ages 25 to 34 and 35 to 44 will decline as the baby boomers age beyond these younger cohorts. However, this trend is somewhat offset by immigration. Although immigration flows are projected to decrease somewhat from 1998 to 2008, majority of immigrants are between the ages of 25 and 34 and the primary reasons for immigration are work opportunities.

The group of workers from age 45 to 54 is expected to increase somewhat through 2008, as this group includes the younger baby boomers. However, this group will increase at a slower rate than in previous periods.

Retirement and pension trends will continue to play a roll in projected labor force participation for workers age 55 and older. A transition is occurring from benefit (employer-paid) pensions to employee contribution pensions. As a result of this transition, combined with increasing life expectancy, workers are expected to retire later. Improved health of the elderly and the decrease in the number of physically demanding jobs will also contribute to later retirement. However, monetary incentives appear to have a stronger influence on retirement decisions than life expectancy. Changes in Social Security eligibility levels in the future will have a significant impact.¹⁴

The population over age 65 will remain at a fairly constant share of the total population through 2008, with participation rates for this cohort increasing slightly by about one percentage point. The participation rate for men ages 65 to 74, increased about 1.3 percent in the period from 1988 to 1998, which was the first time this age cohort showed an increase since 1890.

The BLS projections show the participation rates for women continuing to increase moderately for all age groups except 16 to 24 year olds. However, the rate of increase is expected to decline over dramatic rises in earlier periods. Women as a share of the total workforce are expected to increase from 46.3 percent in 1998, to 48 percent by 2015. Women will account for about 59 percent of labor force growth during this period.¹⁵

For men, participation rates are not projected to change significantly for 25 to 64 year olds. The aggregate participation rate for both men and women of all ages is projected to decline slightly from 67.1 percent in 1998, to 66.9 percent in 2015, to 63.2 in 2025. The drop from 2015 to 2025 is largely due to the baby boomers, who will be between 61 and 79 years old by 2025, and will be leaving the workforce.¹⁶

Overall, from 1998 to 2008, about 21 million men will have joined the labor force and 14 million will have left. During this same time period, 21 million women will have joined the labor force, but only 11 million will leave.¹⁷ It is interesting to note that for the first time in history, the number of new male and female labor force entrants is projected to be the same.

The change in the racial makeup of the U.S. population will also have an impact on project labor force participation rates. Among the race/ethnic groups, those with older populations, primarily white non-Hispanic men will have the greatest projected decline in overall labor force participation (**Figure 5-13**). At the same time, the relative share of white non-Hispanics the labor force will decline from 74 percent to 64 percent from 1998 to 2025. Hispanics will continue to increase in terms of their share of the total labor force, and will be equal to blacks by 2008. Hispanics will be the second largest racial group by 2025, accounting for 17 percent of the labor force. The number of Asians in the labor force will also

¹⁴ Steuerle, Eugene and Spiro, Christopher. "Adjusting for Life Expectancy in Measures of Labor Force Participation." The Urban Institute Retirement Project. October 1999.

¹⁵ National Council of Women's Organizations, 1998.

¹⁶ Fullerton, Howard. November 1999.

¹⁷ Fullerton, Howard. November 1999.

continue to grow, although this group will remain the smallest racial group in terms of share of the labor force, increasing from 4.6 percent to 7.7 percent. The share of blacks in the labor force will remain fairly constant, increasing from 11.6 to 13.4 by 2025.¹⁸

FIGURE 5-13
PROJECTED LABOR FORCE PARTICIPATION
BY RACE/ETHNICITY AND GENDER

Race/Gender	1998	2008
White non-Hispanic	67.2%	67.9%
Men	75.0%	73.9%
Women	59.9%	62.3%
Black	65.6%	66.3%
Men	69.0%	68.3%
Women	62.8%	64.6%
Asian and Other	67.0%	66.9%
Men	75.5%	74.0%
Women	59.2%	60.5%
Hispanic	67.9%	67.7%
Men	79.8%	77.9%
Women	55.6%	57.9%

Source: Bureau of Labor Statistics, Monthly Labor Review, Nov 1999.

Note: All rates apply to persons age 16 and older.

5.2.3 Summary

A number of important points can be derived from this literature that provide a basis for the developing labor force participation rates for Maricopa County. Data from the Bureau of Labor Statistics provide clear evidence of the wave-like impact of the baby boomers across age cohorts. At the same time, labor force participation rates among women are expected to increase at all age levels, while participation rates for men will decrease slightly at all age cohorts except 65 and over. The labor force will also become more racially diverse with increasing numbers of Hispanics and also Asians. This dynamic impacts overall participation rates, which vary measurably by race. This information on national projected participation rates by age and sex can be combined with local historical labor force participation rates to produce projections for Maricopa County.

5.3 LABOR FORCE TRENDS FOR MARICOPA COUNTY

Labor data from the 1980 and 1990 Censuses were examined to gain insight into the labor market and participation in Maricopa County during these years. Data from the Summary Tape File 3 provides the complete population data by race and Hispanic origin, age cohort, and gender as well as labor statistics by race and gender. Labor statistics include total labor force, civilian employed and unemployed, and labor force participation. PUMS, which is based on a sample of households, provides the labor data by five-year age cohorts and allows for the allocation of the STF totals across the races in 1980 and 1990 (Figures 5-14 and 5-15).

¹⁸ Fullerton, Howard. December 1999.

As the data shows, the unemployment rate differs among the sexes and the races (**Figures 5-16 and 6-17**). The Black and American Indian populations represent the highest unemployment rate in Maricopa County. This is likely due to historic and social factors affecting the minority population nationwide. Generally, Black and American Indian men in Maricopa County had higher unemployment rates than their female counterparts, while the unemployment rates differed slightly among the other groups. *Countywide women had lower unemployment rates than men in both 1980 and 1990.* According to the Bureau of Labor Statistics, in 1999 that relationship had reversed with national unemployment rate for women 2 percentage points above the male unemployment rate, while for Arizona it was 1 percent higher. This may reflect several factors including higher female education attainment, increased labor participation, and excellent economic conditions.

FIGURE 5-14
LABOR FORCE PARTICIPATION BY RACE AND HISPANIC ORIGIN
MARICOPA COUNTY, 1980

Race	Sex	All people over age 16	Total Labor Force	Not in Labor Force	Labor Force Participation	Civilian Employed	Civilian Unemployed	Unemployment Rate	Non Civilian Employed
White	F	523,556	263,590	259,966	50.3%	250,276	12,423	4.7%	899
	M	486,359	365,470	120,889	75.1%	339,772	17,882	5.0%	7,873
	T	1,009,915	629,060	380,855	62.3%	590,048	30,305	4.9%	8,772
Black	F	16,044	9,207	6,837	57.4%	8,275	817	9.0%	114
	M	16,346	11,763	4,583	72.0%	9,519	1,194	11.1%	1,048
	T	32,390	20,970	11,420	64.7%	17,794	2,011	10.2%	1,162
American Indian	F	7,737	3,990	3,747	51.6%	3,509	458	11.5%	24
	M	6,834	4,732	2,102	69.2%	4,073	592	12.7%	70
	T	14,571	8,722	5,849	59.9%	7,582	1,050	12.2%	94
Asian	F	5,249	2,988	2,261	56.9%	2,821	154	5.2%	14
	M	4,473	3,350	1,123	74.9%	3,160	85	2.6%	121
	T	9,722	6,338	3,384	65.2%	5,981	239	3.9%	135
Other	F	35,545	17,014	18,531	47.9%	15,345	1,608	9.5%	53
	M	36,973	29,642	7,331	80.2%	26,628	2,639	9.0%	328
	T	72,518	46,656	25,862	64.3%	41,973	4,247	9.2%	381
Hispanic*	F	61,166	30,129	31,037	49.3%	27,642	2,384	7.9%	104
	M	62,177	50,036	12,141	80.5%	45,189	4,268	8.6%	580
	T	123,343	80,165	43,178	65.0%	72,831	6,652	8.4%	684
County	F	588,131	296,942	291,189	50.5%	280,472	15,367	5.2%	1,104
	M	550,985	414,640	136,345	75.3%	382,962	22,240	5.5%	9,440
	T	1,139,116	711,582	427,534	62.5%	663,434	37,607	5.4%	10,544

Sources: U.S. Bureau of the Census, 1980; Applied Economics, 2001.

* Hispanic persons are included in all races.

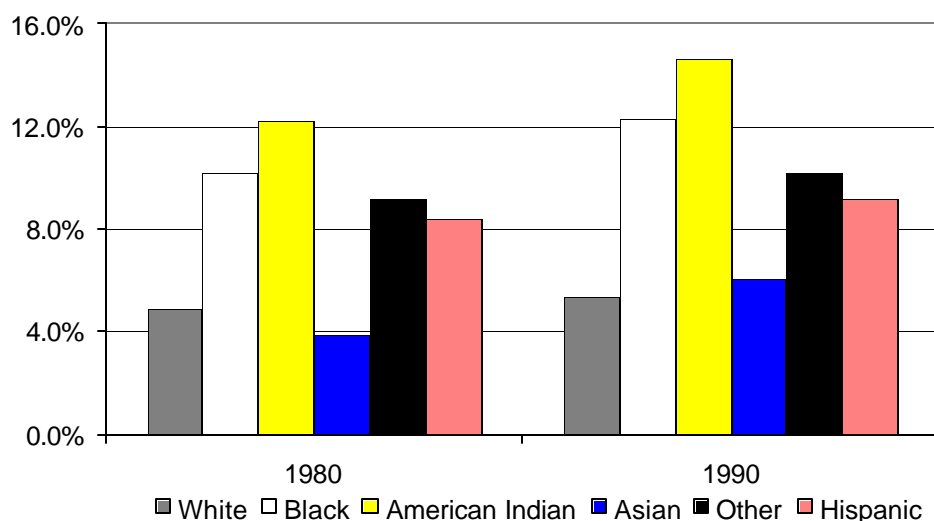
FIGURE 5-15
LABOR FORCE PARTICIPATION BY RACE AND HISPANIC ORIGIN
MARICOPA COUNTY, 1990

Race	Sex	All people over age 16	Total Labor Force	Not in Labor Force	Labor Force Participation	Civilian Employed	Civilian Unemployed	Unemployment Rate	Non Civilian Employed
White	F	728,168	419,949	308,219	57.7%	397,985	21,176	5.1%	788
	M	682,566	513,223	169,343	75.2%	478,563	28,176	5.6%	6,484
	T	1,410,734	933,172	477,562	66.1%	876,548	49,352	5.3%	7,272
Black	F	25,677	15,574	10,103	60.7%	13,584	1,902	12.3%	88
	M	25,241	18,122	7,119	71.8%	15,219	2,141	12.3%	762
	T	50,918	33,696	17,222	66.2%	28,803	4,043	12.3%	850
American Indian	F	13,510	8,092	5,418	59.9%	7,082	991	12.3%	19
	M	11,587	8,385	3,202	72.4%	6,885	1,406	17.0%	94
	T	25,097	16,477	8,620	65.7%	13,967	2,397	14.6%	113
Asian	F	13,691	8,258	5,433	60.3%	7,796	436	5.3%	26
	M	12,769	10,184	2,585	79.8%	9,426	673	6.7%	85
	T	26,460	18,442	8,018	69.7%	17,222	1,109	6.0%	111
Other	F	53,128	30,867	22,261	58.1%	27,460	3,357	10.9%	50
	M	56,861	46,747	10,114	82.2%	41,925	4,484	9.7%	338
	T	109,989	77,614	32,375	70.6%	69,385	7,841	10.2%	388
Hispanic*	F	106,641	61,993	44,648	58.1%	56,001	5,884	9.5%	108
	M	111,468	89,807	21,661	80.6%	81,257	7,935	8.9%	615
	T	218,109	151,800	66,309	69.6%	137,258	13,819	9.1%	723
County	F	834,174	482,740	351,434	57.9%	453,907	27,862	5.8%	971
	M	789,024	596,661	192,363	75.6%	552,018	36,880	6.3%	7,763
	T	1,623,198	1,079,401	543,797	66.5%	1,005,925	64,742	6.0%	8,734

Sources: U.S. Bureau of the Census, 1980; Applied Economics, 2001.

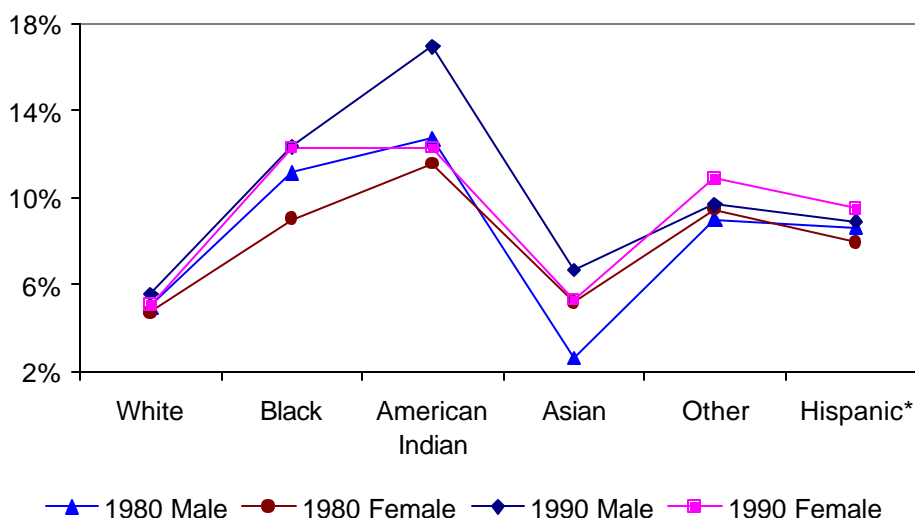
* Hispanic persons are included in all races.

**FIGURE 5-16
UNEMPLOYMENT RATE BY RACE
MARICOPA COUNTY**



Sources: U.S. Census of the Bureau, 1980, 1990; Applied Economics, 2001.

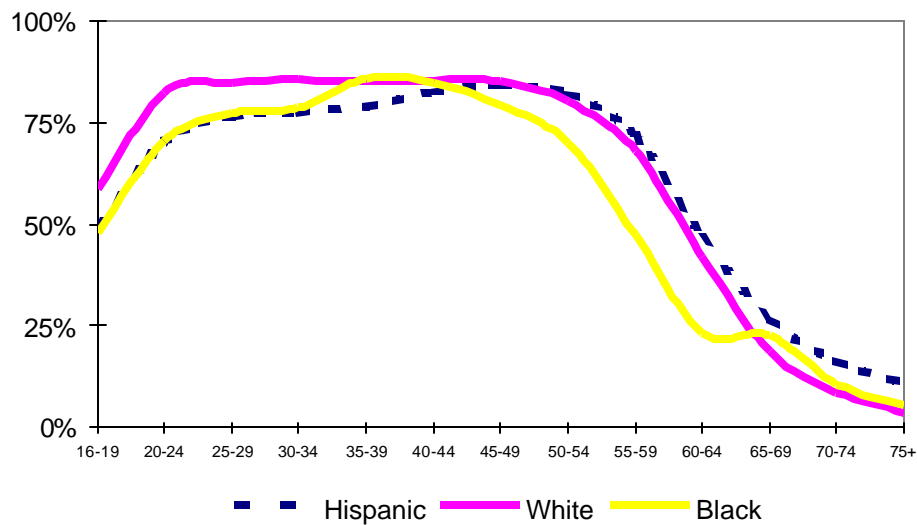
**FIGURE 5-17
UNEMPLOYMENT RATE BY GENDER AND SEX
MARICOPA COUNTY 1990**



Sources: U.S. Census of the Bureau, 1980, 1990; Applied Economics, 2001.

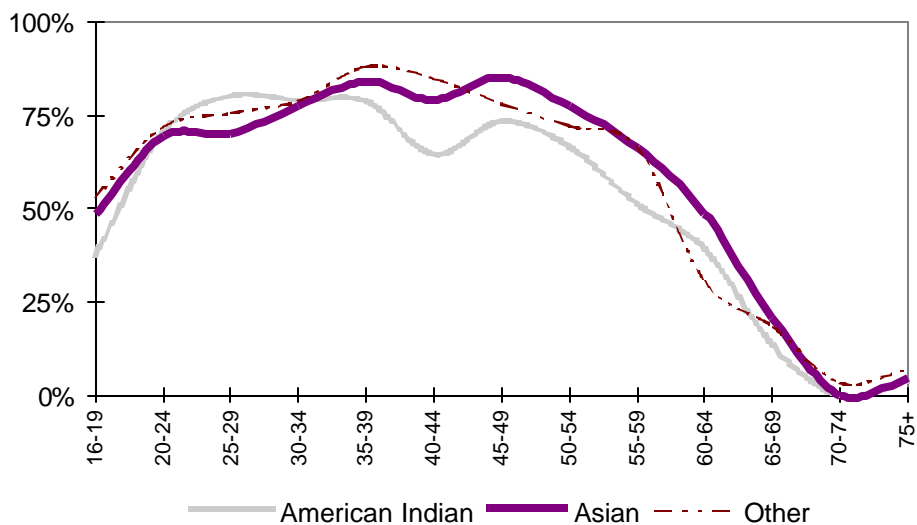
Labor force participation rates also vary among the races, sex, and age cohorts. *In general, participation is very high in all race groups from ages 25 through age 60 (Figures 5-18 and 5-19).* Due to the smaller populations of both the Asian and American Indian populations in Maricopa County, the curves fluctuate more noticeably than the White or Hispanic trend lines. All races show a noticeable decline in participation rate after the retirement age of 65; however, the White, Hispanic, and Black populations indicate increased labor force participation after the age of 75.

FIGURE 5-18
LABOR FORCE PARTICIPATION RATES BY AGE
MARICOPA COUNTY SELECT RACES 1990



Sources: U.S. Census of the Bureau, 1990; Applied Economics, 2001.

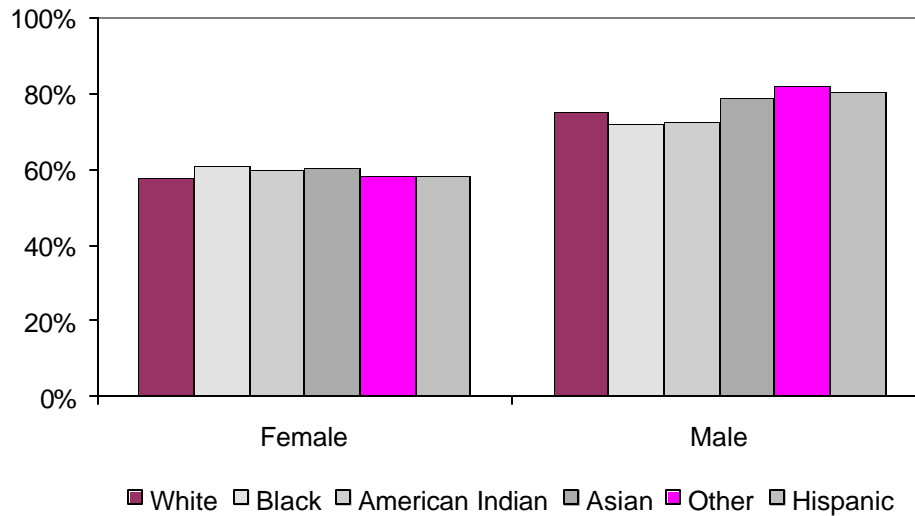
FIGURE 5-19
LABOR FORCE PARTICIPATION RATES BY AGE
MARICOPA COUNTY SELECT RACES 1990



Sources: U.S. Census of the Bureau, 1980, 1990; Applied Economics, 2001.

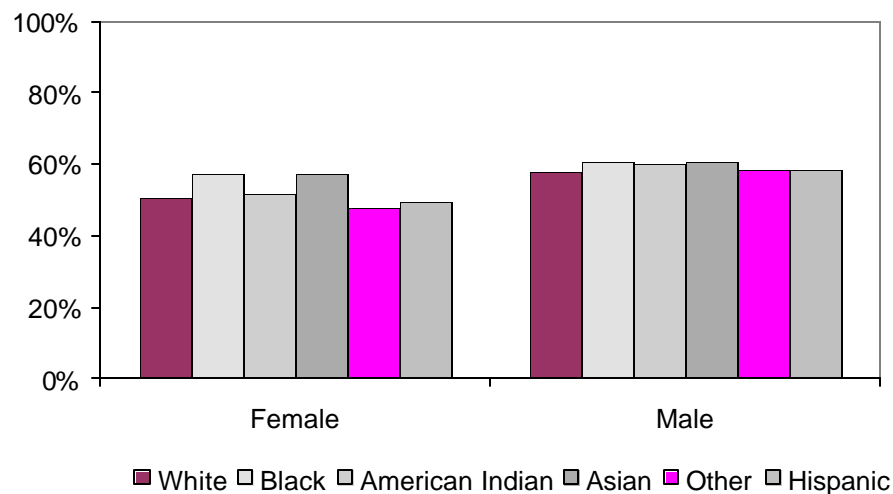
Female labor force participation also tends to be much lower than male participation in all race groups for many historical and cultural circumstances (**Figure 5-20**). *It should be noted that the total female labor force participation increased from 50.5 percent in 1980 to 57.9 percent in 1990 while the male participation rate increased by only 0.3 percent (Figure 5-21).* The growth in the female labor force participation rates over this time period in Maricopa County mirrors national trends reported by the BLS. This trend is the result of many sociological factors, as more housewives went to work full time to help support the family and gain their own personal economic freedom.

**FIGURE 5-20
LABOR FORCE PARTICIPATION RATE BY RACE AND GENDER
MARICOPA COUNTY 1990**



Source: U.S. Census of the Bureau, 1990.

**FIGURE 5-21
FEMALE LABOR FORCE PARTICIPATION RATE BY RACE
MARICOPA COUNTY**



Sources: U.S. Census of the Bureau, 1980, 1990; Applied Economics, 2001.

Age-specific labor force detail by race and gender are presented in Appendix B Tables 19 through 23 for 1980, and Tables 24 through 28 for 1990. The five tables in each year list the population over age 16, the labor force, labor force participation rate, the civilian employment, and the civilian unemployment, respectively. Again, the data is based on PUMS data, but adjusted to fit the STF population age 16 and over. In 1980, the Census did not provide labor statistics in age detail for all the races. Therefore, age-specific labor detail is only available at the county level for the White, Black, and Hispanic populations.

The Bureau of Labor Statistics compiles labor force information with demographic detail for the United States, as shown in **Figures 5-22** and **5-23**. *The national labor force participation rates differ very little from the rates in Maricopa County (see Tables 27 and 32 in Appendix B). In general, rates across the working age groups increased notably from 1980 to 1990, again reflecting the higher female participation in the labor force. Labor force participation rates in Maricopa County were slightly higher among the younger working age population, and then lower than the national trends for the retirement, and close to retirement age groups (Figure 5-24).* This is likely the result of a relatively small university student population and the quite large retirement population with respect to the national averages.

FIGURE 5-22
LABOR FORCE PARTICIPATION RATES 1980
UNITED STATES

Race	Sex	16-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total
White	M	63.7%	87.2%	95.2%	96.7%	96.7%	95.8%	94.2%	90.2%	82.9%	61.6%	28.8%	18.0%	9.0%	78.2%
	F	56.2%	70.6%	66.4%	63.1%	64.3%	65.9%	61.6%	57.8%	48.1%	32.9%	14.7%	7.5%	2.5%	51.2%
	T	60.0%	78.8%	80.7%	79.7%	80.2%	80.5%	77.5%	73.4%	64.6%	46.2%	20.9%	11.9%	4.9%	64.1%
Black	M	43.2%	79.8%	90.2%	91.4%	89.8%	88.5%	85.2%	80.7%	70.2%	51.2%	25.3%	16.2%	6.7%	70.6%
	F	34.9%	60.4%	69.7%	71.6%	68.7%	67.4%	65.2%	57.6%	52.5%	35.6%	18.7%	7.9%	2.5%	53.2%
	T	38.9%	69.1%	78.9%	79.0%	78.0%	76.8%	74.2%	67.8%	60.4%	42.6%	21.5%	11.4%	4.1%	61.0%
American Indian, Asian, Other	M	45.9%	63.9%	84.3%	91.3%	91.5%	93.6%	91.0%	85.7%	77.8%	71.0%	30.2%	26.5%	9.5%	74.5%
	F	42.3%	57.5%	61.7%	65.5%	68.1%	68.3%	64.9%	59.8%	50.0%	31.8%	17.0%	2.5%	4.1%	55.4%
	T	44.2%	60.9%	71.7%	77.3%	79.3%	80.8%	77.3%	72.1%	62.9%	48.0%	23.6%	13.5%	6.6%	64.6%
Hispanic	M	60.0%	88.0%	93.3%	93.2%	94.3%	93.2%	91.6%	91.5%	84.0%	57.7%	33.0%	16.1%	7.7%	81.4%
	F	40.1%	56.9%	52.6%	55.5%	55.5%	54.9%	53.0%	55.9%	39.6%	28.0%	10.0%	5.3%	1.0%	47.4%
	T	50.3%	72.7%	72.7%	74.3%	74.3%	73.2%	71.4%	73.1%	60.8%	41.7%	20.5%	10.0%	3.6%	64.0%
All	M	60.5%	85.9%	94.4%	96.1%	95.9%	95.0%	93.3%	89.3%	81.7%	60.8%	28.5%	17.9%	8.8%	77.4%
	F	52.9%	68.9%	66.7%	64.1%	64.9%	66.1%	62.1%	57.8%	48.5%	33.2%	15.1%	9.5%	2.5%	51.5%
	T	56.7%	77.2%	80.2%	79.7%	79.9%	80.1%	77.2%	72.8%	64.2%	45.9%	21.0%	11.9%	4.8%	63.8%

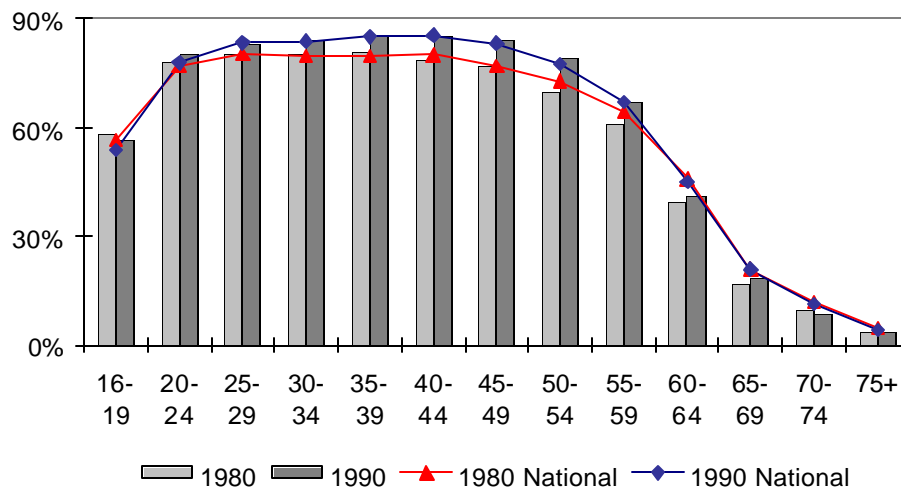
Source: Bureau of Labor Statistics, www.bls.gov, 2001.

FIGURE 5-23
LABOR FORCE PARTICIPATION RATES 1990
UNITED STATES

Race	Sex	16-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total
White	M	59.6%	86.1%	94.8%	95.6%	95.8%	94.7%	93.1%	89.9%	81.2%	56.1%	26.6%	15.6%	7.3%	77.1%
	F	45.6%	73.4%	74.5%	73.6%	75.6%	77.8%	75.0%	66.9%	55.7%	35.8%	17.0%	8.1%	2.6%	57.4%
	T	57.5%	79.8%	84.7%	84.6%	85.7%	86.1%	83.9%	78.2%	68.0%	45.4%	21.3%	11.3%	4.3%	66.9%
Black	M	40.7%	76.8%	88.5%	89.1%	88.5%	87.5%	86.5%	79.7%	67.2%	47.4%	19.1%	14.2%	4.9%	71.1%
	F	36.8%	62.3%	70.9%	73.7%	77.1%	78.4%	74.0%	66.7%	51.7%	34.3%	17.7%	9.8%	3.2%	58.3%
	T	38.7%	68.8%	78.7%	80.6%	82.3%	82.6%	79.7%	72.5%	58.5%	40.0%	18.3%	11.7%	3.9%	64.0%
American Indian, Asian, Other	M	37.6%	72.2%	85.6%	87.1%	89.8%	93.1%	88.8%	86.8%	80.6%	62.8%	25.0%	11.1%	6.3%	75.0%
	F	37.3%	62.0%	64.2%	67.5%	37.9%	69.4%	71.6%	66.8%	56.5%	30.3%	14.6%	7.6%	2.9%	57.4%
	T	31.3%	67.2%	74.8%	77.1%	78.5%	80.5%	80.1%	76.7%	67.2%	44.7%	19.1%	9.3%	4.3%	65.4%
Hispanic	M	56.0%	89.6%	94.2%	94.0%	93.8%	91.6%	87.6%	86.4%	78.0%	52.8%	22.4%	9.6%	5.6%	81.4%
	F	38.7%	59.2%	59.4%	63.3%	66.1%	65.9%	63.0%	46.3%	46.3%	31.1%	12.1%	8.5%	1.3%	53.1%
	T	47.7%	75.7%	77.7%	78.9%	80.2%	78.5%	75.5%	69.1%	60.6%	41.3%	16.8%	9.0%	3.3%	67.4%
All	M	55.7%	84.4%	93.7%	94.5%	94.8%	93.9%	92.2%	88.8%	79.9%	55.5%	26.0%	15.4%	7.1%	76.4%
	F	51.6%	71.3%	73.6%	73.3%	75.5%	77.5%	74.7%	66.9%	55.3%	35.5%	17.0%	8.2%	2.7%	57.5%
	T	53.7%	77.8%	83.4%	83.8%	85.0%	85.5%	83.3%	77.5%	67.0%	44.8%	21.0%	11.3%	4.3%	66.5%

Source: Bureau of Labor Statistics, www.bls.gov, 2001.

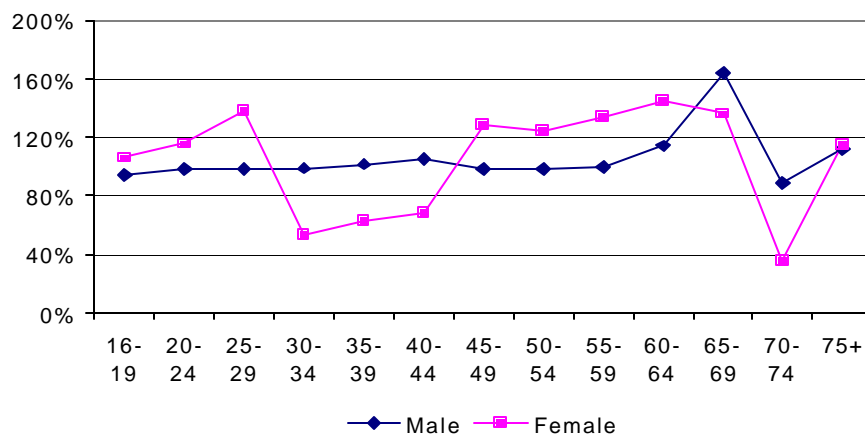
FIGURE 5-24
LABOR FORCE PARTICIPATION BY AGE COHORT
MARICOPA COUNTY AND UNITED STATES



Sources: Bureau of Labor Statistics, 2001; Bureau of the Census, 1980, 1990; Applied Economics, 2001.

Finally, the Bureau of Labor Statistics projects labor force characteristics of the population over 16 and labor force by age cohort and race for the United States. These projections were compiled and averaged to give ten-year growth rates by age, gender, and race. *In general, the baby boomers are expected to extend their participation in the work force. There is also an expected increase in the over 75 labor force, perhaps signaling the longer life spans, improved quality of life at the older ages, and the inadequacy of Social Security.* **Figures 5-26 and 5-27** show the annual growth per year for population over 16 and labor force, respectively. **Figure 5-28** shows the labor force growth indexed with the total population over 16. **Figure 5-25** shows the indices for total male and female population in the United States. Although there are no labor force projections available for Maricopa County, the national projections are a good benchmark for local labor force trends since the past national data closely approximates county levels.

FIGURE 5-25
LABOR FORCE GROWTH WITH RESPECT TO POPULATION GROWTH
UNITED STATES, 1998-2008



Source: Bureau of Labor Statistics, 2001.

FIGURE 5-26
PROJECTED AVERAGE ANNUAL LABOR FORCE GROWTH, 1998-2008
UNITED STATES

		16-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+
White	M	0.72%	1.20%	0.62%	-1.02%	-1.65%	-0.91%	1.44%	2.61%	3.90%	4.70%	3.30%	0.52%	1.62%
	F	0.84%	1.45%	0.76%	-0.63%	-1.06%	-0.70%	1.77%	3.16%	5.17%	5.82%	2.73%	-0.13%	0.83%
	T	0.78%	1.32%	0.69%	-0.84%	-1.39%	-0.82%	1.60%	2.87%	4.48%	5.19%	3.07%	0.25%	1.32%
Black	M	1.87%	1.43%	0.94%	-0.24%	-0.46%	0.35%	2.76%	5.32%	5.76%	4.53%	3.98%	2.50%	3.64%
	F	2.25%	1.77%	1.19%	0.02%	-0.12%	0.53%	3.09%	5.76%	7.73%	5.42%	0.56%	0.86%	1.82%
	T	2.08%	1.62%	1.07%	-0.10%	-0.28%	0.44%	2.93%	5.55%	6.58%	5.00%	2.47%	1.89%	2.91%
American Indian, Asian, Other	M	3.20%	2.92%	1.37%	0.91%	1.75%	2.05%	3.46%	4.69%	7.16%	6.58%	7.17%	5.24%	6.25%
	F	2.30%	2.94%	2.09%	2.07%	2.96%	2.66%	3.66%	6.06%	8.35%	9.87%	5.00%	4.44%	5.83%
	T	2.76%	2.92%	1.69%	1.42%	2.30%	2.34%	3.56%	5.34%	7.78%	7.88%	6.39%	5.00%	6.00%
Hispanic	M	3.07%	2.28%	2.39%	0.90%	1.07%	3.06%	5.39%	6.84%	6.86%	6.61%	4.93%	3.64%	5.88%
	F	3.53%	3.02%	3.46%	2.55%	2.19%	4.02%	6.67%	6.95%	7.90%	6.94%	3.33%	3.33%	6.67%
	T	3.29%	2.58%	2.83%	1.55%	1.54%	3.47%	5.95%	6.86%	7.29%	6.76%	4.36%	3.51%	6.54%
All	M	0.95%	1.31%	0.70%	-0.82%	-1.35%	-0.64%	1.67%	2.92%	4.16%	4.77%	3.51%	0.80%	1.86%
	F	1.08%	1.58%	0.91%	-0.39%	-0.72%	-0.37%	2.03%	3.56%	5.51%	5.92%	2.61%	0.07%	1.18%
	T	1.01%	1.44%	0.80%	-0.62%	-1.06%	-0.51%	1.84%	3.22%	4.79%	5.28%	3.13%	0.50%	1.59%

Source: Bureau of Labor Statistics, www.bls.gov, 2001.

FIGURE 5-27
PROJECTED AVERAGE ANNUAL POPULATION OVER 16, 1998-2008
UNITED STATES

		16-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+
White	M	0.79%	1.20%	0.63%	-1.04%	-1.64%	-0.89%	1.46%	2.63%	3.88%	4.12%	1.99%	-0.15%	1.49%
	F	0.83%	1.24%	0.54%	-0.99%	-1.49%	-0.85%	1.36%	2.51%	3.76%	3.97%	1.75%	-0.63%	0.81%
	T	0.81%	1.22%	0.58%	-1.01%	-1.56%	-0.87%	1.41%	2.56%	3.82%	4.04%	1.87%	-0.42%	1.08%
Black	M	1.52%	1.46%	0.93%	-0.23%	-0.47%	0.33%	2.76%	5.32%	5.75%	3.99%	2.36%	0.99%	2.65%
	F	1.48%	1.43%	0.90%	-0.21%	-0.48%	0.25%	2.41%	4.87%	5.72%	3.94%	2.44%	1.04%	1.72%
	T	1.50%	1.44%	0.91%	-0.22%	-0.47%	0.29%	2.57%	5.07%	5.73%	3.96%	2.41%	1.02%	2.07%
American Indian, Asian, Other	M	2.79%	2.89%	1.34%	0.88%	1.74%	2.05%	3.46%	4.67%	7.16%	6.14%	5.71%	4.59%	4.15%
	F	2.34%	2.49%	1.52%	1.49%	2.25%	2.28%	3.09%	4.79%	7.35%	7.19%	4.48%	3.66%	5.93%
	T	2.58%	2.69%	1.44%	1.20%	2.01%	2.17%	3.26%	4.73%	7.30%	6.71%	4.97%	4.06%	5.17%
Hispanic	M	3.16%	2.30%	2.38%	0.89%	1.06%	3.06%	5.37%	6.83%	6.89%	5.98%	4.01%	3.49%	6.18%
	F	3.37%	2.49%	2.68%	1.93%	1.68%	3.19%	5.21%	5.90%	6.71%	5.34%	4.35%	3.57%	6.36%
	T	3.26%	2.39%	2.53%	1.39%	1.37%	3.12%	5.30%	6.33%	6.77%	5.64%	4.22%	3.54%	6.30%
All	M	1.01%	1.33%	0.71%	-0.83%	-1.33%	-0.61%	1.70%	2.97%	4.17%	4.18%	2.14%	0.90%	1.66%
	F	1.02%	1.37%	0.66%	-0.73%	-1.15%	-0.54%	1.58%	2.87%	4.12%	4.08%	1.92%	0.20%	1.03%
	T	1.01%	1.34%	0.68%	-0.78%	-1.24%	-0.57%	1.64%	2.92%	4.14%	4.13%	2.02%	0.55%	1.27%

Source: Bureau of Labor Statistics, www.bls.gov, 2001.

FIGURE 5-28
LABOR FORCE GROWTH WITH RESPECT TO POPULATION GROWTH, 1998-2008
UNITED STATES

		16-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+
White	M	91.1%	100.0%	98.4%	98.1%	100.6%	102.2%	98.6%	99.2%	100.5%	114.1%	165.8%	-346.7%	108.7%
	F	101.2%	116.9%	140.7%	63.6%	71.1%	82.4%	130.1%	125.9%	137.5%	146.6%	156.0%	20.6%	102.5%
	T	96.3%	108.2%	119.0%	83.2%	89.1%	94.3%	113.5%	112.1%	117.3%	128.5%	164.2%	-59.5%	122.2%
Black	M	123.0%	97.9%	101.1%	104.3%	97.9%	106.1%	100.0%	100.0%	100.2%	113.5%	168.6%	252.5%	137.4%
	F	152.0%	123.8%	132.2%	-9.5%	25.0%	212.0%	128.2%	118.3%	135.1%	137.6%	23.0%	82.7%	105.8%
	T	138.7%	112.5%	117.6%	45.5%	59.6%	151.7%	114.0%	109.5%	114.8%	126.3%	102.5%	185.3%	140.6%
American Indian, Asian, Other	M	114.7%	101.0%	102.2%	103.4%	100.6%	100.0%	100.0%	100.4%	100.0%	107.2%	125.6%	114.2%	150.6%
	F	98.3%	118.1%	137.5%	138.9%	131.6%	116.7%	118.4%	126.5%	113.6%	137.3%	111.6%	121.3%	98.3%
	T	107.0%	108.6%	117.4%	118.3%	114.4%	107.8%	109.2%	112.9%	106.6%	117.4%	128.6%	123.2%	116.1%
Hispanic	M	97.2%	99.1%	100.4%	101.1%	100.9%	100.0%	100.4%	100.1%	99.6%	110.5%	122.9%	104.3%	95.1%
	F	104.7%	121.3%	129.1%	132.1%	130.4%	126.0%	128.0%	117.8%	117.7%	130.0%	76.6%	93.3%	104.9%
	T	100.9%	107.9%	111.9%	111.5%	112.4%	111.2%	112.3%	108.4%	107.7%	119.9%	103.3%	99.2%	103.8%
All	M	94.3%	98.5%	98.6%	98.8%	101.5%	104.9%	98.2%	98.3%	99.8%	114.1%	164.0%	88.9%	112.0%
	F	105.9%	115.3%	137.9%	53.4%	62.6%	68.5%	128.5%	124.0%	133.7%	145.1%	135.9%	35.0%	114.6%
	T	100.3%	107.3%	117.0%	79.6%	85.8%	90.2%	112.3%	110.4%	115.6%	127.8%	155.2%	90.9%	124.9%

Source: Bureau of Labor Statistics, www.bls.gov, 2001.

5.4 CONCLUSIONS FOR MARICOPA COUNTY

Educational data and labor force status of provide insight into the changing nature of the population since 1980. In general, people over 25 in Maricopa County were more educated in 1990 than they were in 1980. The most impressive gains were seen in the Black and American Indian populations, with much lower percentages of the population without a high school diploma. High percentages of the Asian and Hispanic groups with nine years or less of schooling suggests a significant presence of respondents born and educated abroad. Female labor force participation in all races increased significantly from 1980 to 1990. It will be interesting to compare the data presented here with the 2000 Census data to determine a continuation or changes in past trends.

5.5 PROJECTED LABOR FORCE PARTICIPATION FOR MARICOPA COUNTY

The methodology described here will produce estimates of total employment at the county level in five-year increments from 2000 to 2055. The employment estimates are based on projected labor force participation rates applied to population by age and sex for Maricopa County. Then, an average unemployment rate is applied to convert labor force into employment. Information from the literature review on labor force participation rate and demographic trends at the national level was incorporated into the methodology.

National projections of labor force participation by age and sex through 2025 are available from the BLS as presented in the literature review. The 2025 projections include six age cohorts. However, projections are available through 2008 from the BLS that include eight age cohorts, dividing the 16 to 24 year olds into two groups, and the 65 and over cohort into two groups. Because there are significant differences within these sub-groups, the eight age cohorts were used for the projection methodology. Estimates for 2015 and 2025 at the national level were based on differences in the previous period between the sub-cohorts (16 to 19, 20 to 24, 65 to 74 and 74 and over) and the major age cohorts (16 to 24 and 65 and over). The resulting national projections are shown below (**Figure 5-29**).

FIGURE 5-29
PROJECTED U.S. LABOR FORCE PARTICIPATION RATES BY SEX AND AGE COHORT

Age	Male						Female					
	1980	1990	1998	2008	2015	2025	1980	1990	1998	2008	2015	2025
16 to 24	74.40%	71.50%	68.40%	68.00%	68.90%	68.10%	61.90%	63.10%	63.30%	64.30%	65.30%	64.10%
16 to 19	na	56.90%	53.30%	52.90%	53.80%	53.00%	na	53.60%	52.30%	52.40%	52.50%	52.38%
20 to 24	na	85.00%	82.00%	81.40%	82.75%	81.55%	na	72.70%	73.00%	74.60%	76.21%	74.27%
25 to 34	95.20%	94.20%	93.20%	93.20%	93.10%	93.00%	65.50%	73.60%	76.30%	79.00%	80.50%	80.00%
35 to 44	95.50%	94.40%	92.60%	92.30%	92.20%	92.10%	65.50%	76.50%	77.10%	80.00%	82.00%	81.90%
45 to 54	91.20%	90.70%	89.20%	88.80%	88.40%	88.30%	59.90%	71.20%	76.20%	80.00%	82.00%	81.80%
55 to 64	72.10%	67.70%	68.10%	69.40%	69.10%	67.70%	41.30%	45.30%	51.20%	57.70%	60.80%	58.80%
65 and over	19.00%	16.40%	16.50%	17.80%	19.80%	19.10%	8.10%	8.70%	8.60%	9.10%	10.30%	9.90%
65 to 74	na	21.30%	22.26%	25.50%	30.79%	28.78%	na	11.90%	13.10%	14.80%	19.16%	17.50%
75 and over	na	7.40%	7.50%	7.51%	7.52%	7.52%	na	2.40%	3.10%	3.00%	2.78%	2.84%

Source: Bureau of Labor Statistics, Monthly Labor Review, Dec 1999; Applied Economics, 2001.

Projected participation rates at the national level are unfortunately not available by both age and race. However, the table below shows an age/race/gender breakdown for 1998. The projections shown in **Figure 5-30** were based on age differences applied to national projections for all ages by race and gender.

FIGURE 5-30
PROJECTED U.S. LABOR FORCE PARTICIPATION BY AGE, GENDER AND RACE

Age/Gender	1998				2008			
	NH White	Black	Asian	Hispanic	NH White	Black	Asian	Hispanic
Women								
16 and older	59.9%	62.8%	59.2%	55.6%	62.3%	64.6%	66.9%	67.7%
16 to 19	56.4%	47.1%	41.4%	44.2%	58.7%	48.6%	46.9%	53.9%
20 to 24	78.1%	65.3%	57.4%	61.2%	83.0%	68.7%	66.3%	76.1%
25 to 34	78.5%	79.6%	67.8%	64.5%	84.5%	84.8%	79.3%	81.3%
35 to 44	78.1%	79.9%	72.9%	67.9%	84.3%	85.3%	85.5%	85.8%
45 to 54	77.8%	74.0%	74.3%	64.7%	85.0%	79.9%	88.2%	82.7%
55 to 64	52.5%	48.5%	49.1%	41.8%	61.5%	56.2%	62.5%	57.4%
65 to 74	13.4%	12.0%	13.1%	10.0%	15.7%	14.0%	16.7%	13.8%
75 and older	3.2%	2.8%	3.1%	2.4%	3.2%	2.8%	3.4%	2.8%
Men								
16 and older	75.0%	69.0%	75.5%	79.8%	73.9%	68.3%	74.0%	77.9%
16 to 19	55.8%	43.7%	42.5%	55.1%	54.5%	42.9%	41.4%	53.4%
20 to 24	85.8%	67.2%	65.4%	84.7%	83.9%	66.0%	63.6%	82.1%
25 to 34	94.5%	87.1%	88.9%	94.0%	93.1%	86.2%	87.1%	91.8%
35 to 44	94.0%	85.0%	91.8%	91.4%	92.3%	83.9%	89.7%	88.9%
45 to 54	90.6%	79.9%	89.4%	86.7%	88.9%	78.7%	87.2%	84.3%
55 to 64	69.0%	57.4%	71.3%	70.2%	69.3%	57.9%	71.2%	69.8%
65 to 74	22.5%	18.9%	26.5%	20.1%	25.4%	21.4%	29.7%	22.5%
75 and older	7.5%	6.3%	8.8%	6.7%	7.4%	6.2%	8.7%	6.6%

Source: Bureau of Labor Statistics, Monthly Labor Review, December 1999; Applied Economics, 2001.

FIGURE 5-30 (continued)
PROJECTED U.S. LABOR FORCE PARTICIPATION BY AGE, GENDER AND RACE

Age/Gender	2015				2025			
	NH White	Black	Asian	Hispanic	NH White	Black	Asian	Hispanic
Women								
16 and older	61.5%	64.2%	66.6%	67.7%	57.5%	60.9%	64.8%	65.4%
16 to 19	58.1%	48.4%	46.8%	54.0%	54.2%	45.8%	45.4%	52.0%
20 to 24	83.7%	69.7%	67.4%	77.8%	76.3%	64.4%	63.9%	73.2%
25 to 34	85.0%	85.9%	80.5%	82.9%	79.0%	80.9%	77.8%	79.5%
35 to 44	85.2%	86.9%	87.2%	87.9%	79.7%	82.3%	84.8%	84.8%
45 to 54	85.9%	81.4%	89.9%	84.8%	80.2%	77.0%	87.3%	81.7%
55 to 64	64.0%	58.9%	65.6%	60.4%	57.9%	54.0%	61.7%	56.5%
65 to 74	20.1%	18.0%	21.5%	17.9%	17.2%	15.6%	19.1%	15.8%
75 and older	2.9%	2.6%	3.1%	2.6%	2.8%	2.5%	3.1%	2.6%
Men								
16 and older	72.9%	67.9%	73.7%	77.9%	68.2%	64.4%	71.7%	75.3%
16 to 19	53.8%	42.7%	41.2%	53.4%	50.4%	40.5%	40.1%	51.5%
20 to 24	84.2%	65.6%	63.3%	82.1%	78.9%	62.2%	61.6%	79.3%
25 to 34	91.8%	85.7%	86.7%	91.8%	85.7%	81.3%	84.4%	88.6%
35 to 44	91.0%	83.4%	89.3%	88.9%	85.0%	79.1%	86.9%	85.9%
45 to 54	87.3%	78.3%	86.8%	84.3%	81.2%	74.2%	84.5%	81.4%
55 to 64	68.1%	57.6%	70.9%	69.8%	62.1%	54.6%	69.0%	67.5%
65 to 74	30.3%	21.3%	29.6%	22.5%	32.0%	20.2%	28.8%	21.7%
75 and older	7.3%	6.2%	8.6%	6.6%	6.9%	5.9%	8.4%	6.3%

Source: Bureau of Labor Statistics, Monthly Labor Review, December 1999; Applied Economics, 2001.

The next step is to develop similar projections of labor force participation for Maricopa County. In order to compare Maricopa County to the nation, data was gathered from the 1990 Census, the 1998 Census Current Population Survey, and DES 2000 estimates.

The 1990 Census data only showed two age cohorts: 16 to 64 and 65 and over. The lack of age breakdown limited the usefulness of this data. However, the 1990 Census does represent a relatively comprehensive population sample. The results show that Maricopa County has slightly higher labor force participation among 16 to 64 year olds, and significantly lower participation among the 65 and over group, particularly men. This may be due to the fact that many people over 65 in Maricopa County have recently relocated from another state, and have come to Arizona specifically to retire. Comparative data from the 1990 Census is shown in **Figure 5-31**.

**FIGURE 5-31
LABOR FORCE PARTICIPATION
MARICOPA COUNTY AND THE UNITED STATES**

Age	Maricopa County		United States	
	Male	Female	Male	Female
16 to 64	86.45%	69.62%	84.50%	68.08%
65 and over	14.57%	7.27%	18.20%	9.02%

Source: 1990 Census

Note: Totals are for noninstitutionalized population.

Next, data was collected from the Census Current Population Survey for Maricopa County. This data is collected monthly. A sample of approximately 900 people in Maricopa County is used to approximate the total population in the county based on a second stage weighting procedure developed by the Census. Data from March and May 1998 were extracted from the survey. The year 1998 corresponds with national estimates from BLS, and March and May typically have limited seasonal employment variation based on historical monthly trends for Maricopa County. Unfortunately, the Current Population Survey sample is relatively small, and based on the variance between the national data and Maricopa County, it was clear that the differences were more a function of insufficient sample size than actual geographic variations.

The third local data source included in the analysis was estimates for Maricopa County of labor force participation by age and sex and race for 2000 from the DES Workforce Development Planning Information. This data includes five age cohorts, combining the 25 to 54 year olds into a single group. However, the differences between Maricopa County and the United States were generally consistent with the 1990 Census data. Participation rates locally tend to be slightly higher for the younger population age 16 to 64, and lower for the population age 65 and over. The DES data for 2000 is shown below in **Figure 5-32**.

FIGURE 5-32
LABOR FORCE PARTICIPATION
MARICOPA COUNTY - 2000

Age	Non-Hispanic White		Black		Asian & Other		Hispanic	
	Male	Female	Male	Female	Male	Female	Male	Female
16 to 19	53.97%	53.99%	32.46%	30.73%	39.61%	31.89%	44.85%	35.46%
20 to 24	79.12%	75.59%	68.15%	60.40%	84.55%	73.47%	95.92%	72.74%
25 to 54	95.91%	80.30%	79.12%	73.58%	83.21%	70.51%	84.92%	64.94%
55 to 64	66.65%	44.74%	55.71%	44.59%	81.89%	38.73%	63.18%	37.24%
65 and over	14.14%	6.93%	16.04%	9.49%	11.93%	10.95%	16.05%	5.61%

Source: Arizona Department of Economic Security, February 2000.

Unfortunately, no long term projections are available for Maricopa County. Therefore, the assumption was made that the percent variation between Maricopa County and the United States by age, race and sex would remain constant through the projection period. Based on this assumption, these differences were applied to the BLS national projections to produce projected labor force participation rates for Maricopa County. The results for Maricopa County are shown below (**Figure 5-33**).

FIGURE 5-33
PROJECTED MARICOPA LABOR FORCE PARTICIPATION BY AGE, GENDER AND RACE

Age/Gender	2000				2008			
	NH White	Black	Asian	Hispanic	NH White	Black	Asian	Hispanic
Female								
16 to 19	54.0%	30.7%	31.9%	35.5%	56.3%	31.7%	36.1%	43.3%
20 to 24	75.6%	60.4%	73.5%	72.7%	80.3%	63.5%	84.8%	90.5%
25 to 34	85.3%	75.3%	66.7%	63.8%	91.9%	80.2%	78.0%	80.4%
35 to 44	84.9%	75.5%	71.7%	67.1%	91.6%	80.6%	84.1%	84.8%
45 to 54	84.6%	70.0%	73.1%	63.9%	92.4%	75.6%	86.7%	81.7%
55 to 64	44.7%	44.6%	38.7%	37.2%	52.4%	51.7%	49.3%	51.1%
65 to 74	11.2%	15.3%	17.7%	9.1%	13.2%	17.8%	22.6%	12.5%
75 and older	2.7%	3.6%	4.2%	2.2%	2.7%	3.6%	4.6%	2.5%
Male								
16 to 19	54.0%	32.5%	39.6%	44.9%	52.8%	31.9%	38.5%	43.5%
20 to 24	79.1%	68.2%	84.6%	95.9%	77.4%	67.0%	82.3%	93.0%
25 to 34	97.4%	82.0%	82.2%	88.0%	96.0%	81.2%	80.5%	85.9%
35 to 44	96.9%	80.1%	84.8%	85.6%	95.2%	79.0%	82.9%	83.3%
45 to 54	93.4%	75.3%	82.6%	81.2%	91.6%	74.2%	80.6%	78.9%
55 to 64	66.6%	55.7%	81.9%	63.2%	66.9%	56.2%	81.8%	62.9%
65 to 74	21.2%	24.1%	17.9%	24.1%	23.9%	27.3%	20.1%	26.9%
75 and older	7.1%	8.0%	6.0%	8.0%	7.0%	7.9%	5.9%	7.8%
Nonlocal	1.33%	1.33%	1.33%	1.33%	1.33%	1.33%	1.33%	1.33%

Source: Bureau of Labor Statistics, Monthly Labor Review, December 1999; MAG Rideshare Survey 2000; Applied Economics, 2001.

Note: Non-Maricopa represents the percentage of the Maricopa County labor force that is made up of residents of other counties, according to the Rideshare survey.

FIGURE 5-33 (continued)
PROJECTED MARICOPA LABOR FORCE PARTICIPATION BY AGE, GENDER AND RACE

Age/Gender	2015				2025			
	NH White	Black	Asian	Hispanic	NH White	Black	Asian	Hispanic
Women								
16 to 19	55.6%	31.5%	36.0%	43.3%	51.9%	29.8%	35.0%	41.8%
20 to 24	81.0%	64.5%	86.3%	92.5%	73.9%	59.6%	81.8%	87.0%
25 to 34	92.4%	81.2%	79.2%	81.9%	85.9%	76.5%	76.6%	78.6%
35 to 44	92.7%	82.1%	85.8%	86.9%	86.6%	77.8%	83.4%	83.9%
45 to 54	93.4%	77.0%	88.5%	83.8%	87.2%	72.8%	85.9%	80.7%
55 to 64	73.5%	54.1%	51.7%	53.9%	57.9%	49.7%	48.7%	50.3%
65 to 74	16.8%	23.0%	29.1%	16.2%	14.4%	19.9%	25.9%	14.3%
75 and older	2.4%	3.3%	4.2%	2.3%	2.3%	3.2%	4.2%	2.3%
Men								
16 to 19	52.1%	31.7%	38.4%	43.5%	48.7%	30.1%	37.3%	42.0%
20 to 24	77.6%	66.6%	81.9%	93.0%	72.8%	63.1%	79.7%	89.8%
25 to 34	94.6%	80.7%	80.2%	85.9%	88.4%	76.6%	78.0%	83.0%
35 to 44	93.8%	78.5%	82.5%	83.3%	87.6%	74.5%	80.3%	80.4%
45 to 54	90.0%	73.7%	80.3%	78.9%	83.7%	69.9%	78.1%	76.2%
55 to 64	65.7%	55.9%	81.4%	62.9%	60.0%	53.0%	79.2%	60.7%
65 to 74	28.5%	27.1%	20.0%	26.9%	30.1%	25.7%	19.5%	26.0%
75 and older	6.9%	7.9%	5.8%	7.8%	6.5%	7.5%	5.7%	7.6%
Nonlocal	1.33%	1.33%	1.33%	1.33%	1.33%	1.33%	1.33%	1.33%

Source: Bureau of Labor Statistics, Monthly Labor Review, December 1999; MAG Rideshare Survey 2000; Applied Economics, 2001.

Note: Non-Maricopa represents the percentage of the Maricopa County labor force that is made up of residents of other counties, according to the Rideshare survey.

These projections for Maricopa County are consistent with the findings from the literature search based on the following trends. The overall participation rate of women of all races in the labor force increases over time through 2015. The increase is particularly significant for non-white women between 2000 and 2008. For men of all races, the participation rate decreases slightly from 1998 to 2008, except for workers over age 65. The impact of aging baby boomers leaving the labor force is most evident from 2015 to 2025.

5.6 PROJECTED LABOR FORCE

In order to calculate projected labor force for Maricopa County, the participation rates shown above were applied to projected population by age, race and sex. The projections are in five-year increments from 2000 to 2040.

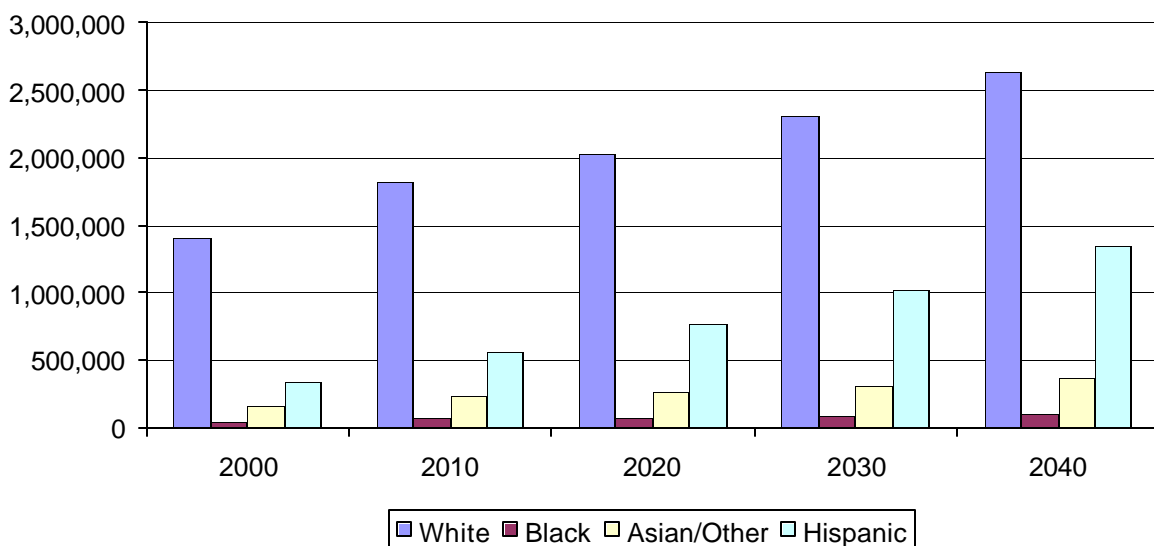
Since the projection years for labor force participation ratios do not match the MAG projection years, the following assumptions were applied.

- Participation rates for 1998 were applied to 2000 population.
- Rates for 2008 were applied to 2005 and 2010 population.
- Rates for 2015 were applied to 2015 population.
- Rates for 2025 were applied for 2020 to 2055 population.

Given that the labor force participation rates shown above change slowly over time, these differences in projection years do not significantly impact the accuracy of the results.

Next, an adjustment was made to add persons who work in Maricopa County, but who reside outside the county. According to the 2000 Rideshare Survey for Maricopa County, 1.33 percent of the participants who work in Maricopa County live in other counties. For the purpose of the projections, this percentage is held constant over time. The percentage of non-resident labor force participants is applied to the total labor force by age, race and sex as described above to calculate the adjusted total labor force in Maricopa County. The final detailed projections with age/sex/race detail are shown in Appendix B, Table 35. A summary by race is shown below in **Figure 5-34**.

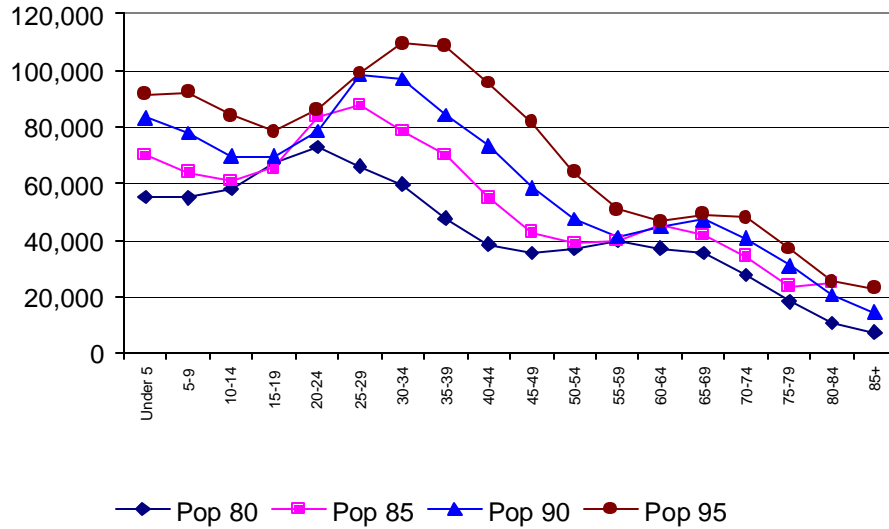
FIGURE 5-34
PROJECTED LABOR FORCE BY RACE
MARICOPA COUNTY, 2000-2040



Source: Applied Economics, 2001.

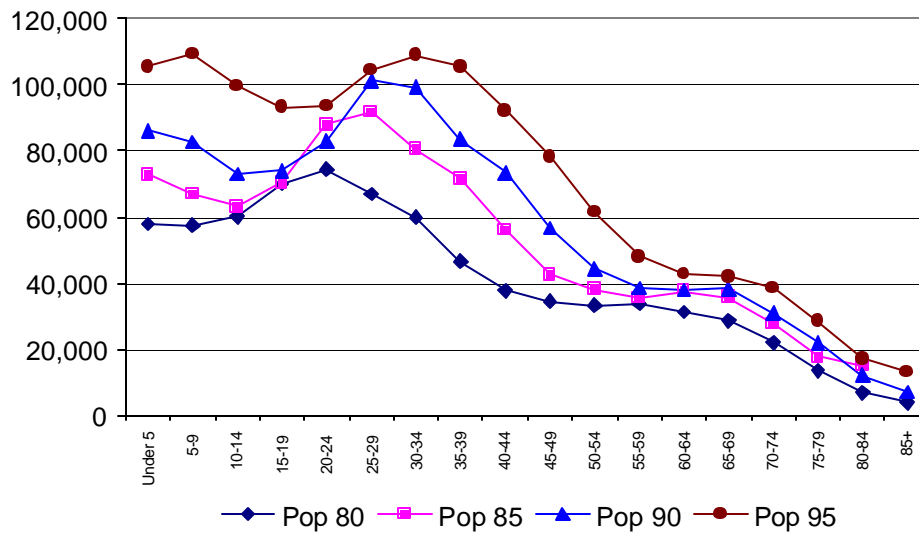
APPENDIX A SUPPLEMENTARY FIGURES

**FIGURE 1
FEMALE POPULATION
MARICOPA COUNTY**



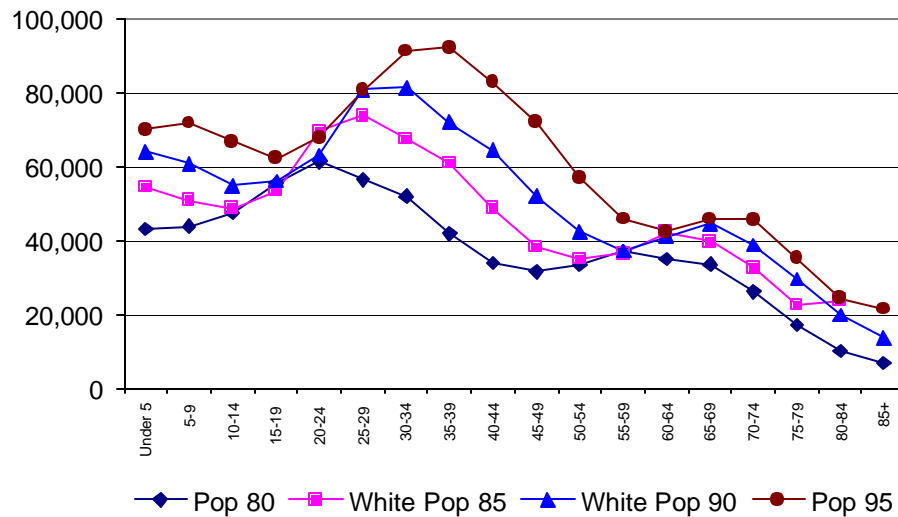
Source: U.S. Bureau of the Census, 1980, 1985, 1990, 1995.

**FIGURE 2
MALE POPULATION
MARICOPA COUNTY**



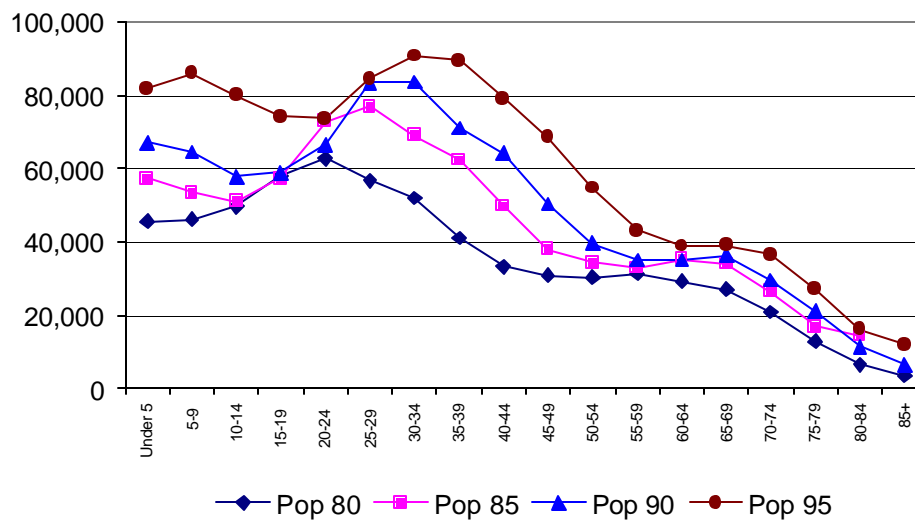
Source: U.S. Bureau of the Census, 1980, 1985, 1990, 1995.

FIGURE 3
WHITE FEMALE POPULATION
MARICOPA COUNTY



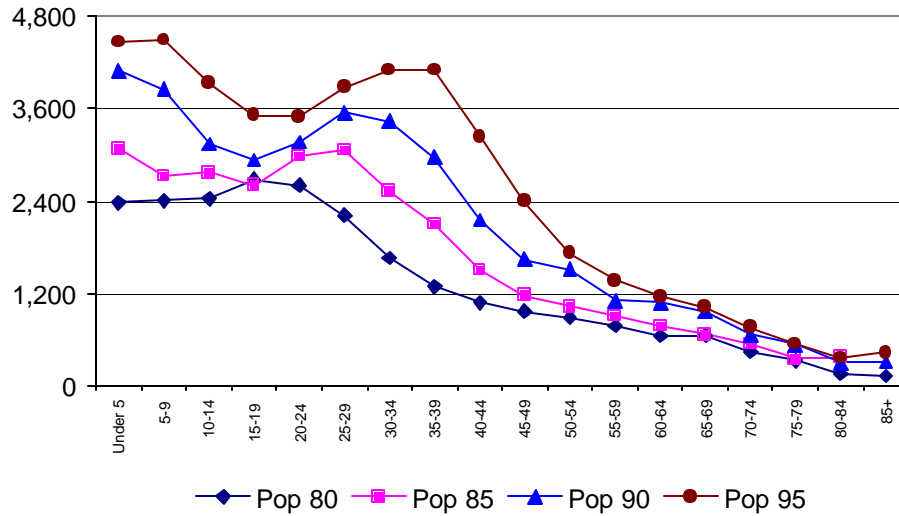
Sources: U.S. Bureau of the Census, 1980, 1985, 1990, 1995; Applied Economics, 2001.

FIGURE 4
WHITE MALE POPULATION
MARICOPA COUNTY



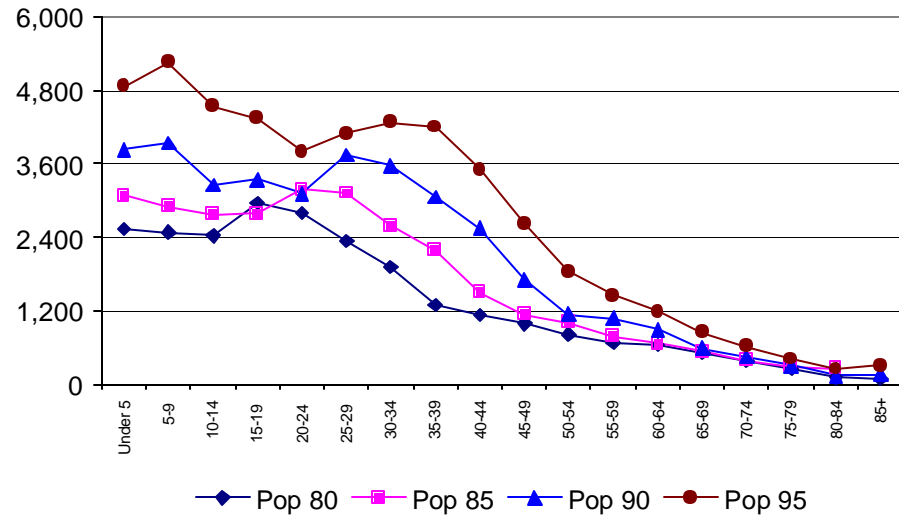
Sources: U.S. Bureau of the Census, 1980, 1985, 1990, 1995; Applied Economics, 2001.

**FIGURE 5
BLACK FEMALE POPULATION
MARICOPA COUNTY**



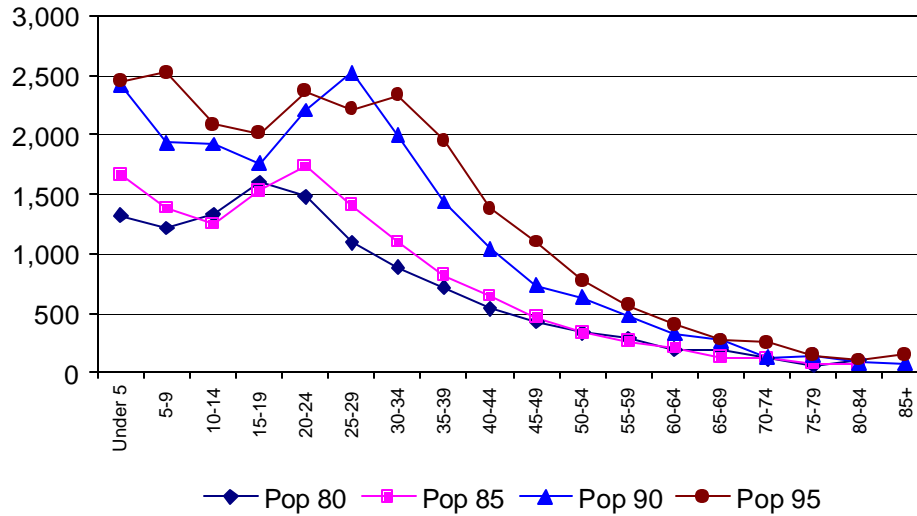
Source: U.S. Bureau of the Census, 1980, 1985, 1990, 1995.

**FIGURE 6
BLACK MALE POPULATION
MARICOPA COUNTY**



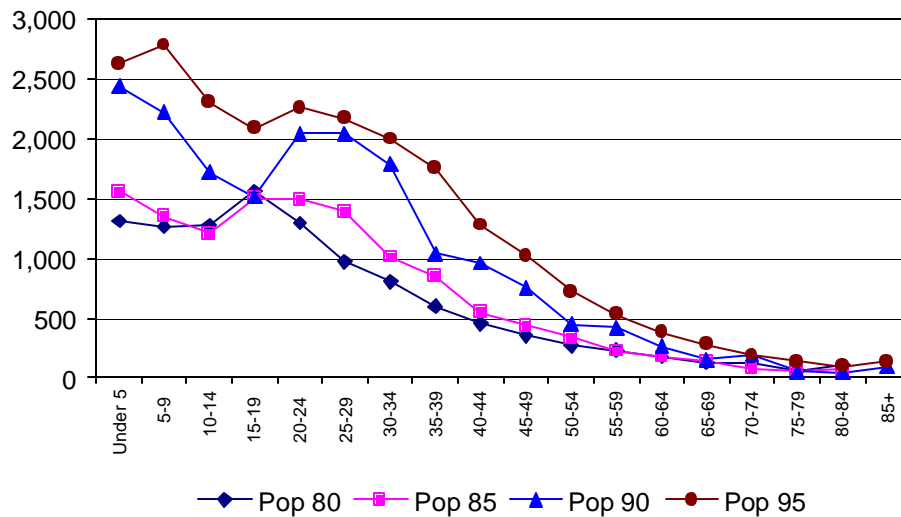
Source: U.S. Bureau of the Census, 1980, 1985, 1990, 1995.

**FIGURE 7
AMERICAN INDIAN FEMALE POPULATION
MARICOPA COUNTY**



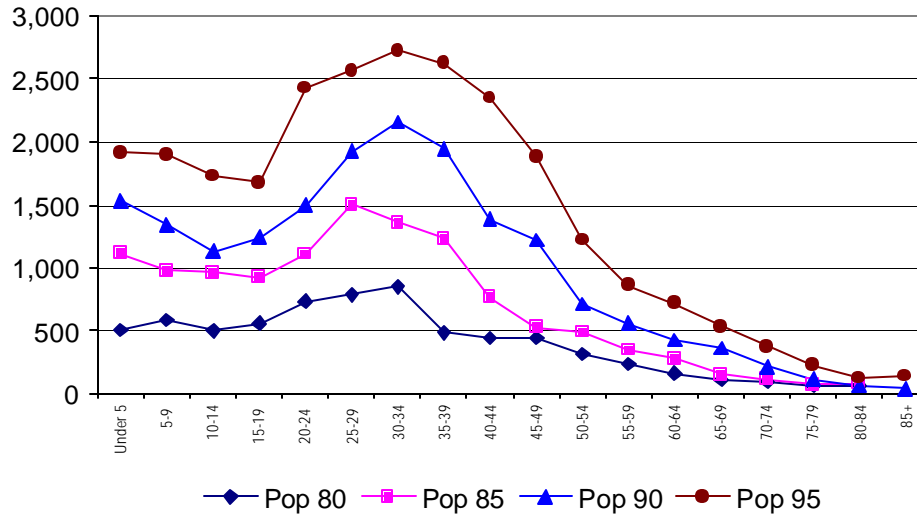
Source: U.S. Bureau of the Census, 1980, 1985, 1990, 1995.

**FIGURE 8
AMERICAN INDIAN MALE POPULATION
MARICOPA COUNTY**



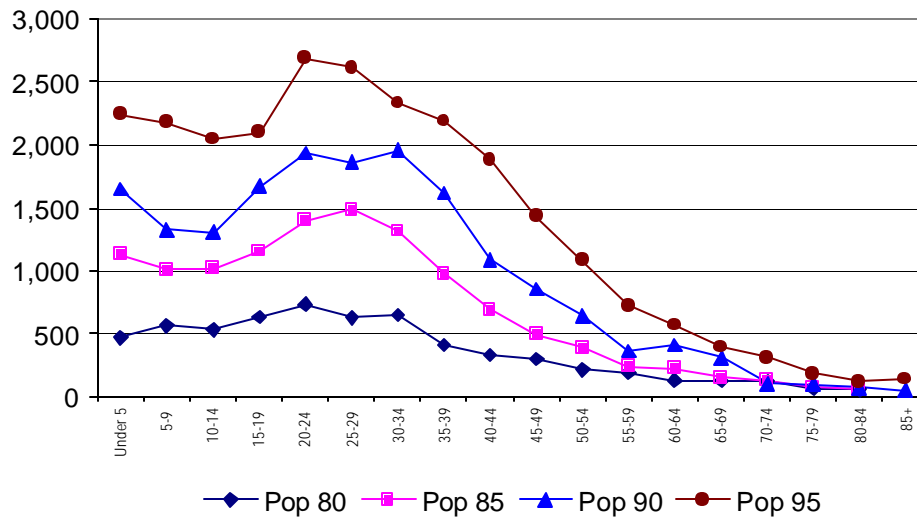
Source: U.S. Bureau of the Census, 1980, 1985, 1990, 1995.

**FIGURE 9
ASIAN FEMALE POPULATION
MARICOPA COUNTY**



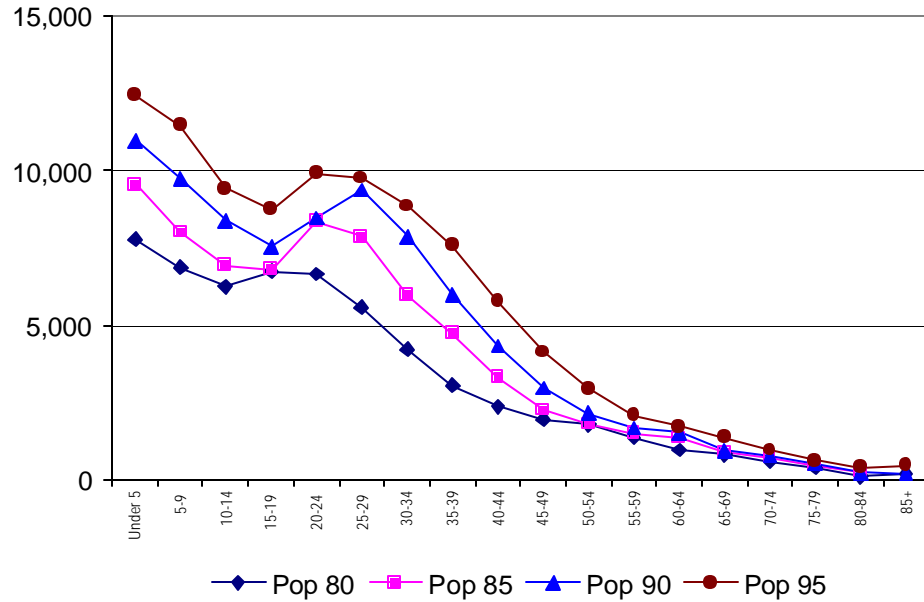
Source: U.S. Bureau of the Census, 1980, 1985, 1990, 1995.

**FIGURE 10
ASIAN MALE POPULATION
MARICOPA COUNTY**



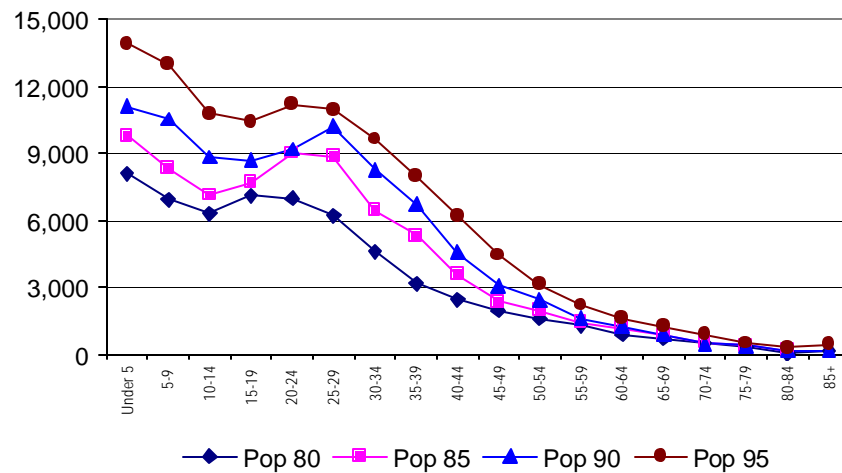
Source: U.S. Bureau of the Census, 1980, 1985, 1990, 1995.

**FIGURE 11
OTHER FEMALE POPULATION
MARICOPA COUNTY**



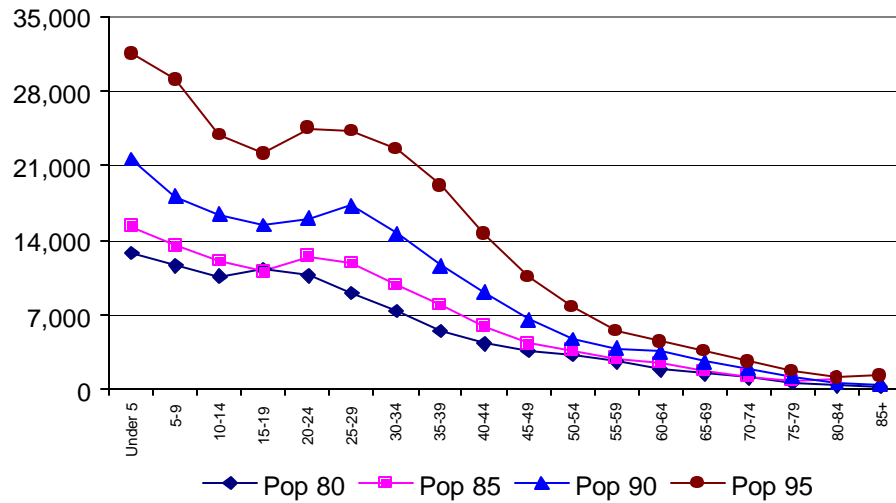
Sources: U.S. Bureau of the Census, 1980, 1985, 1990, 1995; Applied Economics, 2001.

**FIGURE 12
OTHER MALE POPULATION
MARICOPA COUNTY**



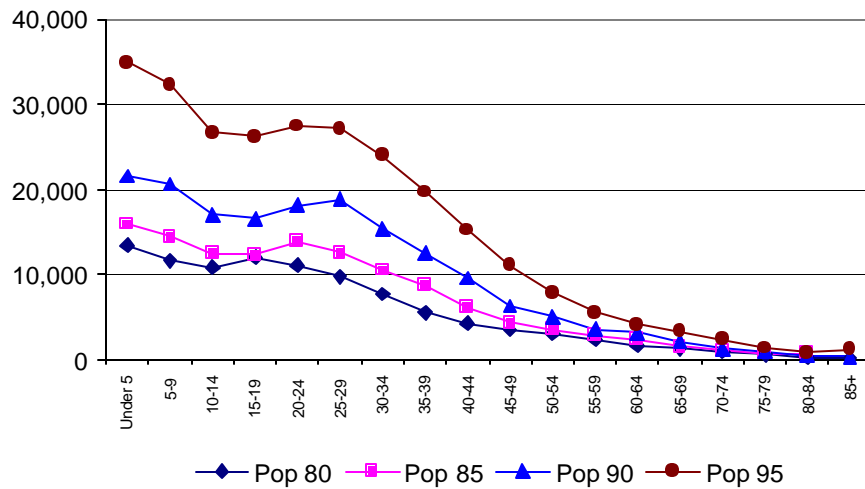
Sources: U.S. Bureau of the Census, 1980, 1985, 1990, 1995; Applied Economics, 2001.

FIGURE 13
HISPANIC FEMALE POPULATION
MARICOPA COUNTY



Source: U.S. Bureau of the Census, 1980, 1985, 1990, 1995.

FIGURE 14
HISPANIC MALE POPULATION
MARICOPA COUNTY



Source: U.S. Bureau of the Census, 1980, 1985, 1990, 1995.

APPENDIX B

SUPPLEMENTARY TABLES

TABLE 1
STATE ORIGINS AND DESTINATIONS OF MIGRATION
MARICOPA COUNTY, 1984-89

In-migration			Out-Migration		
State	Returns	Exemptions	State	Returns	Exemptions
Unidentified	110,479	220,164	Unidentified	58,896	119,911
Other Arizona	37,754	76,554	Other Arizona	29,389	62,232
California	34,227	67,567	California	28,970	53,383
Illinois	14,413	27,226	Texas	5,231	10,654
Colorado	13,643	26,146	Abroad	5,354	10,591
Texas	10,404	21,519	Colorado	4,640	8,944
Abroad	6,865	14,687	Nevada	3,084	6,171
Utah	4,864	11,862	Washington	3,137	5,994
New Mexico	5,055	10,536	Illinois	3,007	5,144
Michigan	5,743	10,357	New Mexico	2,162	4,517
Washington	5,114	9,879	Utah	1,601	3,714
New York	4,629	8,650	Florida	1,717	3,300
Minnesota	4,674	8,568	Oregon	1,438	2,868
Ohio	4,278	7,893	Michigan	1,412	2,649
Nevada	3,543	6,580	Minnesota	1,437	2,552
Iowa	3,618	6,371	Ohio	1,251	2,477
Wisconsin	3,223	5,500	New York	900	1,487
Florida	2,707	4,966	Tennessee	439	1,021
Oregon	2,582	4,960	Pennsylvania	470	991
Indiana	2,024	3,828	Missouri	529	968
Nebraska	2,057	3,647	Oklahoma	478	954
Oklahoma	1,709	3,551	Hawaii	471	848
Missouri	1,854	3,527	Wisconsin	495	817
New Jersey	1,784	3,453	Kansas	400	817
Pennsylvania	1,831	3,389	Connecticut	414	789
Montana	1,631	2,973	Massachusetts	429	763
Massachusetts	1,562	2,743	Indiana	388	712
Wyoming	1,311	2,699	Virginia	327	700
Kansas	1,375	2,608	Georgia	345	696
Connecticut	1,307	2,508	Alaska	295	623
North Dakota	1,289	2,290	Iowa	303	586
Idaho	1,008	2,152	Nebraska	319	527
Alaska	1,027	1,953	Idaho	239	489
Hawaii	931	1,701	Maryland	206	373
South Dakota	870	1,513	North Carolina	126	219
Virginia	580	1,199	South Carolina	58	137
Maryland	606	1,158	New Hampshire	65	131
Georgia	540	983	Wyoming	52	111
Tennessee	431	825	New Jersey	50	96
Arkansas	235	482	Montana	59	103
Kentucky	249	481	Washington D.C.	70	80
Washington D.C.	246	378			
New Hampshire	157	335			
North Carolina	193	321			
Delaware	51	122			
Louisiana	50	114			

Source: IRS, Statistics of Income, 1984-85 to 1988-89.

TABLE 2
STATE ORIGINS AND DESTINATIONS OF MIGRATION
MARICOPA COUNTY, 1989-94

In-migration			Out-Migration		
State	Returns	Exemptions	State	Returns	Exemptions
California	54,451	110,513	Other Arizona	32,136	66,721
Other Arizona	39,649	78,338	Unidentified	30,674	63,461
Unidentified	34,200	65,030	California	31,241	57,189
Texas	12,081	25,065	Texas	9,023	19,110
Illinois	12,301	22,737	Colorado	8,058	15,711
Colorado	10,793	19,995	Washington	7,122	14,122
Abroad	7,383	14,874	Nevada	6,911	13,993
New York	8,035	14,581	Abroad	4,658	9,413
Washington	7,354	14,193	Illinois	5,090	9,298
New Mexico	6,587	13,287	New Mexico	4,230	9,038
Michigan	6,261	11,201	Florida	4,199	8,138
Florida	5,927	11,190	Oregon	3,818	7,909
Nevada	5,401	10,632	Utah	3,252	7,676
Utah	4,166	9,749	Ohio	2,757	5,386
Ohio	4,878	8,764	Michigan	2,389	4,555
New Jersey	4,136	7,733	Minnesota	2,318	4,215
Minnesota	4,312	7,364	New York	2,004	3,426
Oregon	3,576	6,857	Missouri	1,707	3,396
Pennsylvania	3,624	6,503	Idaho	1,312	2,997
Wisconsin	3,630	6,136	Oklahoma	1,363	2,865
Massachusetts	3,037	5,286	Wisconsin	1,548	2,754
Missouri	2,743	5,072	Indiana	1,413	2,742
Indiana	2,730	5,053	Georgia	1,232	2,544
Kansas	2,136	4,104	Kansas	1,181	2,481
Connecticut	2,142	3,840	Iowa	1,274	2,447
Iowa	2,197	3,710	Pennsylvania	1,319	2,440
Hawaii	1,878	3,606	Virginia	1,144	2,255
Virginia	1,870	3,606	North Carolina	1,035	2,021
Oklahoma	1,738	3,500	Alaska	953	2,003
Nebraska	1,825	3,121	Hawaii	1,131	1,992
Maryland	1,559	2,899	Nebraska	966	1,821
Idaho	1,243	2,620	Tennessee	852	1,812
Georgia	1,331	2,610	New Jersey	915	1,660
North Carolina	1,113	2,241	Montana	825	1,614
Arkansas	1,082	2,078	Massachusetts	863	1,424
Tennessee	1,009	1,988	Maryland	731	1,349
Montana	1,021	1,751	Wyoming	580	1,145
Wyoming	899	1,636	Arkansas	517	1,139
New Hampshire	877	1,619	Connecticut	600	1,099
Louisiana	745	1,531	South Dakota	476	886
South Carolina	663	1,359	South Carolina	429	830
North Dakota	741	1,349	Louisiana	381	758
South Dakota	700	1,228	North Dakota	328	618
Arkansas	562	1,169	Alabama	231	524
Kentucky	472	903	Kentucky	274	521
Maine	447	764	Mississippi	153	351
Alabama	310	698	New Hampshire	154	316
Rhode Island	307	534	Delaware	116	229
Washington D.C.	317	452	Maine	115	219
Delaware	234	429	Washington D.C.	164	214
Mississippi	165	374	Rhode Island	85	161
Vermont	167	287	Vermont	49	88
West Virginia	39	79	West Virginia	12	24

Source: IRS, Statistics of Income, 1989-90 to 1993-94.

TABLE 3
STATE ORIGINS AND DESTINATIONS OF MIGRATION
MARICOPA COUNTY, 1994-99

In-migration			Out-Migration		
State	Returns	Exemptions	State	Returns	Exemptions
California	57,836	118,999	Other Arizona	35,271	72,334
Other Arizona	45,237	86,894	California	27,940	49,095
Illinois	19,241	35,964	Unidentified	25,005	50,803
Texas	16,471	33,268	Texas	9,875	20,157
Unidentified	24,631	46,415	Colorado	8,700	16,604
Colorado	12,401	23,030	Washington	6,192	11,328
New York	12,052	21,508	Nevada	5,245	10,004
Washington	11,393	21,358	New Mexico	4,352	9,112
New Mexico	9,410	19,014	Illinois	5,051	8,886
Florida	8,845	16,174	Florida	4,851	8,712
Abroad	9,320	15,709	Oregon	4,335	8,621
Michigan	8,553	15,118	Utah	3,334	7,760
Ohio	8,199	14,347	Abroad	3,478	6,503
Utah	5,913	13,449	Ohio	2,853	5,498
Nevada	6,420	12,062	Michigan	2,828	5,228
Oregon	6,026	11,668	Minnesota	2,424	4,439
Pennsylvania	6,744	11,637	New York	2,821	4,411
Minnesota	6,671	11,556	Missouri	1,972	3,886
New Jersey	5,755	10,354	Virginia	1,741	3,380
Wisconsin	5,835	9,997	Pennsylvania	1,848	3,363
Indiana	4,693	8,436	North Carolina	1,629	3,329
Missouri	4,037	7,316	Georgia	1,620	3,163
Massachusetts	4,098	6,824	Wisconsin	1,729	3,094
Virginia	3,467	6,637	Idaho	1,353	3,091
Connecticut	3,103	5,855	Oklahoma	1,350	2,852
Iowa	3,353	5,674	Indiana	1,433	2,718
Kansas	2,869	5,485	Massachusetts	1,623	2,637
Nebraska	2,963	5,173	New Jersey	1,476	2,572
Georgia	2,651	4,996	Kansas	1,227	2,447
Maryland	2,605	4,810	Tennessee	1,144	2,309
North Carolina	2,250	4,309	Iowa	1,106	2,076
Oklahoma	2,126	4,149	Nebraska	864	1,635
Hawaii	2,169	4,012	Maryland	907	1,623
Idaho	1,861	3,887	Hawaii	847	1,444
Tennessee	1,790	3,354	Connecticut	814	1,432
Montana	1,561	2,712	Montana	753	1,400
Alaska	1,475	2,704	Arkansas	670	1,399
Wyoming	1,206	2,221	Alaska	645	1,204
Louisiana	1,034	2,015	South Carolina	548	1,116
New Hampshire	1,057	1,873	Louisiana	533	1,004
South Dakota	1,069	1,844	Wyoming	565	997
South Carolina	926	1,831	Alabama	364	753
North Dakota	941	1,597	New Hampshire	387	736
Kentucky	883	1,588	Kentucky	392	720
Arkansas	768	1,478	South Dakota	375	684
Alabama	654	1,349	North Dakota	329	608
Maine	664	1,133	Delaware	177	383
Rhode Island	582	989	Washington D.C.	244	309
Delaware	415	750	Maine	180	309
Mississippi	357	721	Mississippi	146	302
Vermont	341	577	Rhode Island	163	273
Washington D.C.	353	501	Vermont	96	186
West Virginia	90	155	West Virginia	16	38

Source: IRS, Statistics of Income, 1994-95 to 1998-99.

TABLE 4
TOP 15 METRO ORIGINS AND DESTINATIONS OF MIGRATION
MARICOPA COUNTY, 1984-89

In-migration			Out-Migration		
Metro Area	Returns	Exemptions	Metro Area	Returns	Exemptions
Chicago, IL	12,042	22,766	Tucson, AZ	9,219	16,934
Los Angeles, CA	11,194	22,074	Los Angeles, CA	9,171	15,436
Tucson, AZ	11,060	20,778	San Diego, CA	7,644	13,552
Denver, CO	7,365	14,286	Anaheim, CA	4,965	9,035
San Diego, CA	5,100	9,682	Riverside, CA	4,100	8,809
Anaheim, CA	4,419	8,700	Flagstaff, AZ	4,365	8,307
Flagstaff, AZ	4,264	7,979	Las Vegas, NV	3,905	7,827
Detroit, MI	4,170	7,636	Denver, CO	3,680	6,942
Salt Lake City, UT	3,139	7,568	Chicago, IL	3,920	6,728
Minneapolis, MN	4,001	7,254	Seattle, WA	2,959	5,689
Riverside, CA	3,069	6,502	San Jose, CA	2,378	4,135
Dallas-Fort Worth, TX	2,733	5,379	Dallas-Fort Worth, TX	2,061	3,985
Las Vegas, NV	2,872	5,376	Oakland, CA	2,151	3,940
Houston, TX	2,592	5,292	Salt Lake City, UT	1,640	3,908
Colorado Springs, CO	2,761	5,172	Sacramento, CA	1,904	3,806

Source: IRS, Statistics of Income, 1984-85 to 1988-89.

TABLE 5
TOP 15 METRO ORIGINS AND DESTINATIONS OF MIGRATION
MARICOPA COUNTY, 1989-94

In-migration			Out-Migration		
Metro Area	Returns	Exemptions	Metro Area	Returns	Exemptions
Los Angeles, CA	14,863	30,597	Tucson, AZ	9,301	16,860
Tucson, AZ	11,074	20,089	Las Vegas, NV	6,921	14,116
Chicago, IL	10,011	18,643	Los Angeles, CA	7,719	12,794
Riverside, CA	6,408	14,225	San Diego, CA	6,634	11,423
San Diego, CA	7,317	14,175	Denver, CO	5,068	9,752
Anaheim, CA	6,555	13,096	Flagstaff, AZ	5,029	8,963
Denver, CO	5,407	10,047	Chicago, IL	4,813	8,651
Flagstaff, AZ	4,903	8,863	Seattle, WA	4,474	8,298
Las Vegas, NV	4,065	8,086	Riverside, CA	3,820	8,026
Seattle, WA	3,853	7,076	Anaheim, CA	4,151	7,412
Salt Lake City, UT	2,809	6,576	Salt Lake City, UT	2,602	6,157
Detroit, MI	3,416	6,162	Portland, OR	2,970	6,123
Albuquerque, NM	2,987	5,860	Dallas-Fort Worth, TX	2,469	4,946
Minneapolis, MN	3,450	5,835	Albuquerque, NM	2,357	4,737
Oakland, CA	2,974	5,802	Minneapolis, MN	2,480	4,444

Source: IRS, Statistics of Income, 1989-90 to 1993-94.

TABLE 6
TOP 15 METRO ORIGINS AND DESTINATIONS OF MIGRATION
MARICOPA COUNTY, 1994-99

In-migration			Out-Migration		
Metro Area	Returns	Exemptions	Metro Area	Returns	Exemptions
Los Angeles, CA	15,376	33,018	Tucson, AZ	8,886	15,974
Chicago, IL	15,437	29,169	Los Angeles, CA	7,542	12,482
Tucson, AZ	12,534	22,318	Denver, CO	5,970	11,195
Riverside, CA	6,331	14,075	San Diego, CA	6,350	10,940
San Diego, CA	6,943	13,416	Las Vegas, NV	5,229	9,922
Anaheim, CA	6,323	12,771	Flagstaff, AZ	5,010	9,149
Denver, CO	6,128	11,560	Chicago, IL	5,116	8,825
Seattle, WA	5,672	10,315	Seattle, WA	4,200	7,277
Flagstaff, AZ	5,683	10,004	Riverside, CA	3,530	7,145
Albuquerque, NM	4,521	9,085	Portland, OR	3,639	7,096
Minneapolis, MN	5,161	8,964	Anaheim, CA	4,017	6,990
Las Vegas, NV	4,540	8,628	Salt Lake City, UT	2,643	6,118
Salt Lake City, UT	3,704	8,337	Dallas-Fort Worth, TX	3,097	6,102
Portland, OR	4,100	8,099	Minneapolis, MN	2,697	4,833
Detroit, MI	4,398	7,922	Albuquerque, NM	2,393	4,668

Source: IRS, Statistics of Income, 1994-95 to 1998-99.

**TABLE 7
HISTORIC NATURAL POPULATION GROWTH, WHITE FEMALE
MARICOPA COUNTY**

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	103	10	11	30	33	30	33	42	57	91	157	237	323	436	561	683	2038	
Births			23	1811	4141	3451	1723	449	66	4								
Birthrate*			0.0005	0.0325	0.0675	0.061	0.0331	0.0107	0.0019	0.0001								
1980	43,288	43,931	47,512	55,750	61,386	56,533	52,080	42,034	34,096	31,741	33,525	37,043	35,204	33,655	26,384	17,356	17,338	668,856
1981	46,188	43,792	46,785	54,074	60,227	57,473	52,937	44,000	35,624	32,120	33,013	36,107	35,245	33,525	27,247	18,408	18,364	675,126
1982	48,479	44,261	46,176	52,588	58,965	57,993	53,809	45,742	37,236	32,727	32,681	35,260	35,092	33,430	27,897	19,382	19,455	681,172
1983	50,257	45,094	45,783	51,278	57,659	58,157	54,611	47,308	38,872	33,532	32,537	34,522	34,803	33,325	28,387	20,256	20,589	686,969
1984	51,601	46,116	45,634	50,153	56,353	58,026	55,285	48,721	40,491	34,501	32,583	33,906	34,427	33,184	28,751	21,021	21,745	692,498
1985	52,582	47,202	45,720	49,223	55,084	57,661	55,797	49,984	42,066	35,597	32,813	33,426	34,008	33,000	29,008	21,680	22,899	697,748
1980-85																		
Migration	1,999	3,721	3,220	4,376	14,589	16,147	11,755	11,097	6,792	2,742	2,377	3,216	8,350	6,850	3,741	1,031	1,148	103,153

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	156	14	13	35	49	51	50	64	78	105	155	255	410	581	759	889	2,395	
Births			17	1,300	4,077	4,285	2,224	625	71	1								
Birthrate*			0.0003	0.0243	0.0585	0.0581	0.0329	0.0102	0.0015	3E-05								
1985	54,581	50,923	48,940	53,599	69,673	73,808	67,552	61,081	48,858	38,339	35,190	36,642	42,358	39,850	32,749	22,711	24,047	800,901
1986	56,104	51,640	49,323	52,633	66,412	72,930	68,752	62,310	51,221	40,332	35,662	36,099	40,816	39,763	33,377	23,751	25,742	806,868
1987	57,110	52,519	49,773	51,937	63,612	71,577	69,536	63,531	53,353	42,393	36,435	35,761	39,487	39,391	33,851	24,671	27,455	812,393
1988	57,695	53,422	50,309	51,471	61,234	69,935	69,892	64,664	55,301	44,463	37,461	35,647	38,368	38,836	34,149	25,470	29,163	817,479
1989	57,943	54,262	50,918	51,205	59,240	68,147	69,848	65,641	57,082	46,503	38,691	35,759	37,458	38,177	34,273	26,141	30,845	822,134
1990	57,926	54,983	51,573	51,115	57,593	66,320	69,456	66,412	58,700	48,485	40,076	36,093	36,759	37,479	34,242	26,680	32,481	826,373
1985-90																		
Migration	6,274	5,922	3,498	5,076	5,701	14,600	12,056	5,555	5,741	3,515	2,405	1,197	4,513	7,282	4,703	3,050	1,287	92,375

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	183	14	15	60	80	98	108	120	147	168	198	298	465	702	892	1044	3084	
Births			17	1376	3623	4762	3214	1050	160	6								
Birthrate*			0.0003	0.0245	0.0572	0.0588	0.0394	0.0146	0.0025	0.0001								
1990	64,200	60,905	55,071	56,191	63,294	80,920	81,512	71,967	64,441	52,000	42,481	37,290	41,272	44,761	38,945	29,730	33,768	918,748
1991	65,381	61,549	56,222	55,907	61,795	77,301	81,286	73,753	65,796	54,312	44,178	38,022	40,019	43,372	39,189	30,464	36,087	924,636
1992	66,040	62,301	57,271	55,911	60,541	74,110	80,382	75,134	67,233	56,426	45,990	38,940	39,173	42,032	39,109	31,078	38,328	930,001
1993	66,295	63,034	58,261	56,123	59,540	71,310	79,022	76,057	68,656	58,399	47,854	40,028	38,686	40,810	38,784	31,536	40,476	934,872
1994	66,246	63,671	59,199	56,491	58,782	68,873	77,377	76,522	69,976	60,255	49,731	41,261	38,515	39,752	38,292	31,827	42,511	939,281
1995	65,976	64,171	60,077	56,972	58,251	66,774	75,576	76,566	71,122	61,999	51,594	42,612	38,624	38,885	37,700	31,956	44,413	943,267
1990-95																		
Migration	4,119	7,758	6,840	5,467	9,713	13,861	15,815	15,627	11,742	10,065	5,636	3,263	4,001	7,130	8,072	3,383	1,765	134,258

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	176	13	20	71	97	108	150	178	221	231	278	336	485	733	1053	1264	3374	
Births			25	1635	3750	4509	3972	1627	262	8								
Birthrate*			0.0004	0.0262	0.0552	0.0559	0.0435	0.0176	0.0032	0.0001								
1995	70,095	71,929	66,917	62,439	67,964	80,635	91,391	92,193	82,864	72,064	57,230	45,875	42,625	46,015	45,772	35,339	46,178	#####
1996	71,683	71,549	67,900	63,263	66,764	77,996	89,093	91,854	84,504	73,986	59,904	47,793	42,783	44,615	44,766	36,087	49,355	#####
1997	72,659	71,563	68,609	64,117	65,969	75,649	86,732	91,126	85,745	75,846	62,416	49,847	43,287	43,544	43,707	36,469	52,439	#####
1998	73,175	71,770	69,180	64,942	65,505	73,614	84,376	90,072	86,590	77,576	64,785	51,977	44,092	42,800	42,669	36,560	55,369	#####
1999	73,351	72,038	69,678	65,715	65,299	71,896	82,089	88,761	87,054	79,125	67,016	54,139	45,149	42,373	41,713	36,430	58,101	#####
2000	73,285	72,288	70,129	66,432	65,289	70,482	79,919	87,257	87,163	80,452	69,100	56,299	46,413	42,244	40,882	36,145	60,609	#####

Source: Applied Economics, 2001.

* Rate of White female births to White females by age group.

TABLE 8
HISTORIC NATURAL POPULATION GROWTH, WHITE MALE
MARICOPA COUNTY

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	273	21	30	107	160	129	113	126	122	178	277	466	630	853	1031	871	1432	
Births			25	1930	4415	3679	1836	479	70	4								
Birthrate*			0.000518	0.034626	0.0719	0.0651	0.0353	0.0114	0.0021	0.0001								
1980	45,560	46,225	49,638	57,782	62,695	56,874	51,950	41,136	33,323	31,005	30,374	31,279	29,422	27,198	21,026	12,896	10,216	638,599
1981	48,594	46,071	48,926	56,049	61,555	57,906	52,820	43,167	34,758	31,288	30,222	30,635	29,156	26,776	21,169	13,542	11,002	643,633
1982	50,981	46,555	48,326	54,523	60,299	58,503	53,720	44,959	36,306	31,798	30,158	30,098	28,821	26,397	21,197	14,050	11,788	648,479
1983	52,826	47,418	47,943	53,185	58,993	58,728	54,558	46,569	37,897	32,512	30,208	29,662	28,454	26,039	21,146	14,434	12,552	653,123
1984	54,214	48,478	47,810	52,039	57,683	58,648	55,271	48,020	39,486	33,396	30,389	29,328	28,082	25,690	21,039	14,711	13,275	657,559
1985	55,220	49,603	47,915	51,098	56,410	58,322	55,825	49,319	41,041	34,415	30,708	29,100	27,725	25,348	20,892	14,898	13,944	661,783
1980-85																		
Migration	2,062	3,836	3,188	6,153	16,570	18,622	13,274	12,976	8,755	3,683	3,705	3,851	7,583	8,630	5,620	2,042	488	121,038

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	208	21	25	92	155	146	129	141	143	181	258	429	644	866	1033	1048	2252	
Births			18	1378	4098	4309	2322	659	75	1								
Birthrate*			0.000368	0.025709	0.0588	0.0584	0.0344	0.0108	0.0015	3E-05								
1985	57,282	53,439	51,103	57,251	72,980	76,944	69,099	62,295	49,796	38,098	34,413	32,951	35,308	33,978	26,512	16,940	14,432	782,821
1986	58,473	54,187	51,545	55,931	69,686	76,006	70,536	63,512	52,145	40,246	34,886	32,811	34,201	33,371	26,914	17,688	15,040	787,178
1987	59,213	55,022	52,048	54,965	66,793	74,600	71,496	64,769	54,262	42,423	35,688	32,794	33,304	32,682	27,107	18,326	15,679	791,172
1988	59,586	55,839	52,618	54,294	64,291	72,900	71,982	65,965	56,201	44,578	36,757	32,939	32,597	31,970	27,123	18,840	16,326	794,804
1989	59,664	56,566	53,236	53,872	62,159	71,042	72,030	67,016	57,987	46,680	38,034	33,264	32,069	31,277	26,998	19,229	16,959	798,083
1990	59,510	57,163	53,876	53,658	60,373	69,134	71,698	67,865	59,621	48,709	39,465	33,773	31,719	30,634	26,769	19,498	17,559	801,024
1985-90																		
Migration	7,538	7,421	3,926	5,153	6,149	14,259	11,938	3,225	4,575	1,674	260	1,320	3,407	5,758	2,890	1,712	593	81,798

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	211	17	18	69	92	113	125	138	170	194	228	343	537	811	1029	1205	2250	
Births			18	1473	3853	5041	3398	1110	169	6								
Birthrate*			0.000327	0.026214	0.0609	0.0623	0.0417	0.0154	0.0026	0.0001								
1990	67,048	64,584	57,802	58,811	66,522	83,393	83,636	71,090	64,196	50,383	39,725	35,093	35,126	36,392	29,659	21,210	18,152	882,822
1991	68,490	65,060	59,140	58,540	64,890	79,910	83,463	73,456	65,401	52,941	41,616	35,667	34,583	35,333	29,930	21,599	19,618	889,639
1992	69,340	65,729	60,306	58,592	63,532	76,802	82,629	75,311	66,835	55,220	43,630	36,496	34,268	34,399	29,934	21,944	20,970	895,936
1993	69,731	66,434	61,371	58,865	62,457	74,048	81,342	76,625	68,349	57,322	45,684	37,552	34,183	33,607	29,757	22,204	22,215	901,747
1994	69,776	67,076	62,365	59,297	61,653	71,632	79,764	77,418	69,819	59,299	47,736	38,795	34,325	32,971	29,468	22,368	23,351	907,112
1995	69,566	67,599	63,287	59,840	61,097	69,542	78,021	77,735	71,150	61,167	49,762	40,186	34,681	32,501	29,121	22,437	24,375	912,068
1990-95																		
Migration	12,225	18,429	16,678	14,244	12,526	15,003	12,651	11,637	8,044	7,458	4,953	2,907	4,270	6,665	7,446	4,704	4,015	163,854

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	196	14	22	79	108	120	167	198	245	257	309	374	539	814	1171	1405	4257	
Births			26	1719	3940	4730	4163	1705	275	8								
Birthrate*			0.000389	0.027531	0.058	0.0587	0.0456	0.0185	0.0033	0.0001								
1995	81,791	86,028	79,965	74,084	73,623	84,545	90,672	89,372	79,194	68,625	54,715	43,093	38,951	39,166	36,567	27,141	28,390	1,075,922
1996	81,802	85,166	81,156	75,180	73,607	82,244	89,282	89,433	80,978	70,474	57,172	45,024	39,229	38,309	35,900	27,523	28,748	1,081,228
1997	81,506	84,480	81,935	76,294	73,814	80,403	87,713	89,205	82,413	72,303	59,494	47,042	39,829	37,693	35,217	27,687	29,116	1,086,143
1998	80,993	83,871	82,422	77,340	74,201	78,973	86,093	88,709	83,512	74,047	61,705	49,103	40,701	37,327	34,569	27,681	29,458	1,090,704
1999	80,337	83,282	82,689	78,273	74,719	77,908	84,513	87,990	84,290	75,656	63,811	51,176	41,795	37,212	33,996	27,554	29,747	1,094,948
2000	79,596	82,679	82,785	79,072	75,319	77,161	83,039	87,101	84,766	77,093	65,806	53,237	43,067	37,336	33,530	27,349	29,971	1,098,909

Source: Applied Economics, 2001.

* Rate of White male births to White females by age group.

TABLE 9
HISTORIC NATURAL POPULATION GROWTH. BLACK FEMALE
MARICOPA COUNTY

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	10	1	1	1	2	2	2	3	4	6	8	10	13	16	17	17	29	
Births			8	170	254	151	54	14	4	0								
Birthrate*			0.003463	0.063628	0.0977	0.0682	0.0326	0.0109	0.0041	0								
1980	2,379	2,407	2,437	2,678	2,600	2,216	1,665	1,293	1,086	971	889	782	647	661	443	329	285	23,768
1981	2,550	2,401	2,430	2,629	2,614	2,290	1,773	1,364	1,123	988	897	793	661	642	468	333	315	24,271
1982	2,693	2,430	2,424	2,588	2,615	2,353	1,873	1,442	1,167	1,009	907	803	674	630	484	341	342	24,775
1983	2,813	2,482	2,425	2,554	2,607	2,403	1,966	1,525	1,218	1,035	919	812	686	624	493	351	368	25,280
1984	2,914	2,547	2,436	2,527	2,595	2,441	2,051	1,610	1,275	1,065	933	822	697	621	500	359	393	25,785
1985	2,998	2,620	2,457	2,508	2,579	2,469	2,126	1,694	1,337	1,101	950	833	708	621	504	367	416	26,289
1980-85 Migration	85	106	316	99	404	587	402	411	169	74	78	81	71	47	45	-14	-38	2,922

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	8	1	0	1	2	2	3	4	4	5	7	9	14	16	18	19	41	
Births			4	151	296	204	124	54	12	1								
Birthrate*			0.001392	0.057763	0.0992	0.0668	0.0492	0.0256	0.008	0.0008								
1985	3,083	2,726	2,773	2,607	2,983	3,056	2,528	2,105	1,506	1,175	1,028	914	779	668	549	353	378	29,211
1986	3,304	2,797	2,763	2,639	2,906	3,039	2,630	2,186	1,622	1,236	1,050	927	792	674	554	371	399	29,890
1987	3,481	2,898	2,770	2,663	2,851	3,010	2,709	2,271	1,730	1,308	1,080	942	805	681	559	386	422	30,565
1988	3,623	3,014	2,795	2,683	2,812	2,976	2,765	2,355	1,833	1,386	1,118	960	818	690	564	398	444	31,235
1989	3,738	3,135	2,838	2,705	2,785	2,941	2,804	2,433	1,932	1,469	1,164	981	831	698	570	408	466	31,900
1990	3,830	3,255	2,897	2,731	2,768	2,908	2,828	2,503	2,027	1,555	1,216	1,007	846	708	576	417	488	32,561
1985-90 Migration	261	597	240	201	393	641	608	461	130	94	297	105	233	251	93	118	125	4,847

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	11	1	1	1	2	3	5	6	7	7	9	12	16	21	24	25	63	
Births			6	226	281	225	137	39	5	0								
Birthrate*			0.002041	0.077089	0.089	0.0633	0.0398	0.013	0.0025	0								
1990	4,091	3,852	3,137	2,932	3,161	3,549	3,436	2,964	2,157	1,649	1,513	1,112	1,079	959	669	535	613	37,408
1991	4,181	3,899	3,279	2,972	3,113	3,468	3,454	3,052	2,311	1,743	1,531	1,180	1,069	961	701	535	646	38,096
1992	4,249	3,955	3,403	3,032	3,083	3,394	3,452	3,126	2,452	1,849	1,564	1,237	1,075	961	727	541	676	38,774
1993	4,302	4,013	3,512	3,105	3,071	3,329	3,435	3,185	2,578	1,961	1,612	1,289	1,090	962	746	551	704	39,445
1994	4,345	4,070	3,612	3,185	3,075	3,274	3,409	3,228	2,691	2,076	1,671	1,340	1,113	966	761	562	730	40,109
1995	4,383	4,124	3,703	3,269	3,095	3,232	3,377	3,258	2,790	2,189	1,742	1,391	1,141	973	774	573	756	40,770
1990-95 Migration	83	366	222	241	404	639	722	836	445	209	-18	-20	20	48	-15	-29	38	4,191

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	11	1	1	2	2	4	6	8	9	10	11	14	18	24	29	29	80	
Births			4	203	304	209	144	63	11	0								
Birthrate*			0.001019	0.057835	0.0869	0.054	0.0351	0.0154	0.0034	0								
1995	4,466	4,490	3,925	3,510	3,499	3,871	4,099	4,094	3,235	2,398	1,724	1,371	1,161	1,021	759	544	794	44,961
1996	4,500	4,484	4,037	3,591	3,499	3,793	4,047	4,087	3,397	2,555	1,847	1,427	1,185	1,024	781	555	812	45,622
1997	4,527	4,487	4,126	3,679	3,515	3,731	3,991	4,071	3,525	2,712	1,976	1,496	1,214	1,032	798	568	831	46,276
1998	4,549	4,494	4,197	3,767	3,545	3,684	3,933	4,047	3,623	2,862	2,109	1,576	1,251	1,043	813	581	850	46,924
1999	4,570	4,504	4,256	3,851	3,587	3,653	3,877	4,016	3,697	3,002	2,246	1,665	1,296	1,059	827	594	869	47,569
2000	4,592	4,517	4,305	3,930	3,638	3,636	3,827	3,980	3,750	3,127	2,381	1,763	1,349	1,081	841	606	889	48,211

Source: Applied Economics, 2001.

* Rate of Black female births to Black females by age group.

TABLE 10
HISTORIC NATURAL POPULATION GROWTH, BLACK MALE
MARICOPA COUNTY

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	15	1	1	3	6	7	7	7	8	11	16	20	22	26	25	22	30	
Births			9	181	270	160	58	15	5	0								
Birthrate*			0.003676	0.067536	0.1037	0.0724	0.0346	0.0115	0.0043	0								
1980	2,379	2,407	2,437	2,678	2,600	2,216	1,665	1,293	1,086	971	889	782	647	661	443	329	285	23,768
1981	2,584	2,400	2,430	2,626	2,609	2,286	1,768	1,360	1,119	983	889	782	651	632	459	328	314	24,221
1982	2,755	2,436	2,423	2,584	2,607	2,343	1,864	1,434	1,158	998	891	783	654	611	466	331	340	24,677
1983	2,898	2,498	2,424	2,548	2,596	2,388	1,952	1,512	1,204	1,018	896	783	656	595	467	334	363	25,134
1984	3,016	2,577	2,438	2,520	2,580	2,422	2,032	1,592	1,256	1,043	904	785	658	583	465	336	384	25,592
1985	3,114	2,664	2,465	2,500	2,562	2,446	2,101	1,671	1,313	1,073	915	787	660	574	462	338	404	26,050
1980-85																		
Migration	-36	238	309	291	614	681	488	521	185	71	95	-4	11	-47	-73	-57	-143	3,143

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	11	1	1	3	5	7	8	8	8	9	12	16	21	23	24	22	33	
Births			4	153	298	205	125	54	12	0								
Birthrate*			0.001401	0.058688	0.0998	0.0672	0.0495	0.0258	0.008	0								
1985	3,078	2,902	2,774	2,791	3,176	3,127	2,589	2,192	1,498	1,144	1,010	783	671	527	389	281	261	29,193
1986	3,301	2,936	2,799	2,785	3,094	3,130	2,688	2,263	1,628	1,205	1,024	811	671	531	391	279	277	29,814
1987	3,480	3,009	2,825	2,785	3,027	3,116	2,768	2,339	1,745	1,279	1,048	836	677	534	393	277	290	30,431
1988	3,624	3,102	2,861	2,790	2,974	3,092	2,829	2,416	1,854	1,362	1,081	861	687	538	396	277	301	31,043
1989	3,740	3,206	2,908	2,802	2,932	3,062	2,873	2,489	1,956	1,448	1,123	886	698	542	398	276	311	31,651
1990	3,833	3,311	2,967	2,820	2,902	3,030	2,902	2,556	2,051	1,538	1,174	914	713	548	401	277	319	32,255
1985-90																		
Migration	2	629	288	523	214	710	663	499	502	174	-27	162	183	45	47	29	-12	4,632

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	15	1	1	6	8	10	12	14	15	14	15	19	24	30	29	27	44	
Births			7	231	287	229	140	39	6	0								
Birthrate*			0.002085	0.078761	0.0909	0.0646	0.0407	0.0133	0.0026	0								
1990	3,835	3,940	3,255	3,343	3,116	3,740	3,565	3,055	2,553	1,712	1,147	1,076	896	593	448	306	307	36,887
1991	3,991	3,918	3,391	3,319	3,153	3,606	3,588	3,143	2,638	1,865	1,243	1,071	907	621	446	305	315	37,518
1992	4,112	3,932	3,495	3,328	3,178	3,506	3,580	3,217	2,723	2,003	1,349	1,086	914	644	449	303	322	38,139
1993	4,206	3,967	3,580	3,355	3,199	3,431	3,553	3,274	2,806	2,129	1,460	1,118	923	663	456	303	327	38,752
1994	4,283	4,014	3,656	3,394	3,222	3,376	3,517	3,315	2,883	2,246	1,572	1,165	936	679	465	304	332	39,359
1995	4,347	4,067	3,726	3,440	3,248	3,337	3,478	3,340	2,952	2,354	1,684	1,224	955	694	474	306	336	39,963
1990-95																		
Migration	514	1,188	817	897	545	754	800	856	553	266	155	226	236	153	150	105	220	8,434

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	16	1	2	7	10	10	15	18	21	20	21	23	28	35	38	34	29	
Births			7	229	335	233	164	70	12	1								
Birthrate*			0.001783	0.065242	0.0957	0.0602	0.04	0.0171	0.0037	0.0004								
1995	4,861	5,255	4,543	4,337	3,793	4,091	4,278	4,196	3,505	2,620	1,839	1,450	1,191	847	624	411	556	48,397
1996	4,924	5,175	4,684	4,371	3,892	4,021	4,226	4,194	3,621	2,776	1,973	1,504	1,213	878	628	417	605	49,100
1997	4,973	5,123	4,780	4,426	3,978	3,985	4,170	4,182	3,713	2,922	2,109	1,572	1,241	906	637	421	652	49,792
1998	5,014	5,092	4,847	4,490	4,057	3,973	4,119	4,161	3,784	3,057	2,246	1,653	1,276	933	648	427	697	50,476
1999	5,051	5,075	4,895	4,554	4,133	3,980	4,075	4,135	3,837	3,178	2,381	1,743	1,319	961	662	432	742	51,153
2000	5,085	5,069	4,929	4,614	4,207	4,000	4,042	4,105	3,873	3,285	2,512	1,841	1,371	990	678	439	784	51,824

Source: Applied Economics, 2001.

* Rate of Black male births to Black females by age group.

**TABLE 11
HISTORIC NATURAL POPULATION GROWTH. AMERICAN INDIAN FEMALE
MARICOPA COUNTY**

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+	Total
Deaths	4	0	0	1	1	1	1	1	2	2	3	4	5	6	7	7	12	
Births			2	78	123	83	43	21	6	0								
Birthrate*			0.001445	0.048622	0.0829	0.0757	0.0483	0.0287	0.0109	0.0007								
1980	1,325	1,216	1,332	1,600	1,482	1,096	885	715	541	431	337	286	196	193	119	63	102	11,919
1981	1,411	1,238	1,309	1,546	1,505	1,172	926	748	574	451	352	292	208	187	126	66	101	12,211
1982	1,487	1,272	1,294	1,498	1,512	1,238	974	782	607	473	368	299	219	185	130	69	101	12,509
1983	1,555	1,315	1,289	1,457	1,508	1,291	1,026	819	640	497	385	309	229	186	133	73	101	12,813
1984	1,615	1,363	1,294	1,423	1,497	1,334	1,078	859	674	523	403	319	239	188	136	75	102	13,120
1985	1,668	1,413	1,308	1,397	1,482	1,365	1,127	901	709	550	423	331	248	191	138	78	103	13,430
1980-85																		
Migration	-4	-29	-57	135	254	43	-27	-80	-63	-88	-83	-68	-34	-62	-14	-5	-35	-215

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+	Total
Deaths	3	0	0	0	1	1	1	1	1	2	3	4	5	6	7	7	15	
Births			3	99	179	116	50	20	1	0								
Birthrate*			0.002398	0.064696	0.1033	0.0824	0.0455	0.0249	0.0015	0								
1985	1,664	1,384	1,251	1,532	1,736	1,408	1,100	821	646	462	340	263	214	129	124	73	68	13,215
1986	1,797	1,440	1,277	1,475	1,695	1,473	1,160	875	679	497	362	275	219	140	118	75	64	13,621
1987	1,905	1,511	1,310	1,436	1,650	1,516	1,221	931	717	531	386	288	224	148	116	76	61	14,027
1988	1,991	1,589	1,350	1,410	1,607	1,542	1,279	987	758	566	412	304	232	156	116	76	59	14,434
1989	2,061	1,670	1,398	1,398	1,567	1,554	1,330	1,044	802	602	439	321	240	164	117	76	58	14,839
1990	2,116	1,748	1,452	1,397	1,532	1,555	1,373	1,099	848	639	468	340	250	171	120	76	57	15,243
1985-90																		
Migration	309	184	472	364	676	965	620	339	195	99	167	138	82	102	6	69	109	4,894

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+	Total
Deaths	1	0	0	0	0	0	1	1	1	1	2	3	4	6	8	10	33	
Births			3	120	160	130	68	20	2	0								
Birthrate*			0.001559	0.068143	0.0725	0.0516	0.0341	0.0139	0.0019	0								
1990	2,425	1,932	1,924	1,761	2,208	2,520	1,993	1,438	1,043	738	635	478	332	273	126	145	166	20,137
1991	2,442	2,030	1,925	1,793	2,118	2,457	2,098	1,548	1,121	798	654	507	357	278	146	131	156	20,559
1992	2,453	2,113	1,946	1,819	2,053	2,389	2,169	1,657	1,205	861	681	533	382	287	161	125	145	20,979
1993	2,459	2,180	1,979	1,844	2,006	2,321	2,212	1,758	1,294	928	715	560	407	299	175	123	136	21,398
1994	2,462	2,236	2,019	1,871	1,973	2,258	2,233	1,848	1,386	999	755	587	432	314	187	124	128	21,814
1995	2,463	2,281	2,063	1,901	1,953	2,201	2,237	1,924	1,476	1,075	802	617	457	330	199	127	122	22,228
1990-95																		
Migration	-11	243	24	109	410	14	97	25	-96	22	-26	-53	-53	-52	55	18	135	861

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+	Total
Deaths	6	1	1	1	2	2	3	4	3	4	5	7	8	10	11	10	26	
Births			2	120	190	122	80	27	4	1								
Birthrate*			0.000958	0.059701	0.0804	0.0551	0.0343	0.0139	0.0029	0.0009								
1995	2,452	2,524	2,087	2,010	2,363	2,215	2,334	1,949	1,380	1,097	776	564	404	278	254	145	257	23,089
1996	2,502	2,509	2,174	2,024	2,291	2,242	2,307	2,022	1,490	1,149	834	599	427	293	248	155	257	23,523
1997	2,539	2,507	2,240	2,053	2,236	2,250	2,291	2,075	1,593	1,213	891	638	452	308	246	161	258	23,951
1998	2,566	2,513	2,292	2,089	2,198	2,245	2,279	2,115	1,685	1,284	949	681	479	325	248	166	261	24,373
1999	2,588	2,523	2,336	2,128	2,175	2,233	2,269	2,144	1,766	1,359	1,009	726	509	344	252	169	264	24,791
2000	2,605	2,535	2,372	2,168	2,164	2,219	2,258	2,165	1,837	1,434	1,071	773	541	363	259	173	267	25,206

Source: Applied Economics, 2001.

* Rate of American Indian female births to American Indian females by age group.

TABLE 12
HISTORIC NATURAL POPULATION GROWTH. AMERICAN INDIAN MALE
MARICOPA COUNTY

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+	Total
Deaths	6	0	0	1	2	3	3	3	3	4	6	8	8	10	9	8	12	
Births			2	79	124	84	43	21	6	0								
Birthrate*			0.001461	0.04917	0.0838	0.0766	0.0488	0.029	0.0111	0.0007								
1980	1,311	1,266	1,276	1,562	1,296	971	807	599	453	353	270	229	173	129	118	65	106	10,984
1981	1,402	1,275	1,274	1,503	1,347	1,033	837	638	479	369	280	229	175	127	111	66	106	11,251
1982	1,483	1,300	1,273	1,456	1,375	1,093	874	675	507	386	291	231	177	127	105	65	106	11,524
1983	1,554	1,336	1,278	1,418	1,389	1,146	915	711	537	405	303	235	179	126	101	64	106	11,804
1984	1,616	1,379	1,289	1,389	1,392	1,191	958	749	568	427	317	241	181	127	98	62	106	12,089
1985	1,671	1,426	1,307	1,368	1,389	1,228	1,001	787	600	449	331	247	184	127	95	60	106	12,376
1980-85																		
Migration	-115	-76	-99	131	104	163	11	63	-49	-13	8	-21	-8	9	-12	5	-34	67

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+	Total
Deaths	5	0	0	1	2	3	3	3	3	4	5	7	9	10	10	10	15	
Births			4	101	183	118	48	21	2	0								
Birthrate*			0.002905	0.06594	0.1053	0.084	0.0436	0.0254	0.0031	0								
1985	1,556	1,350	1,208	1,499	1,493	1,391	1,012	850	551	436	339	226	176	136	83	65	72	12,443
1986	1,716	1,391	1,236	1,440	1,492	1,409	1,084	879	607	455	353	241	177	134	82	58	67	12,819
1987	1,845	1,455	1,267	1,398	1,479	1,422	1,145	916	657	481	368	256	180	132	81	54	62	13,198
1988	1,948	1,533	1,304	1,370	1,461	1,431	1,197	958	705	512	384	270	185	131	80	50	57	13,576
1989	2,031	1,616	1,349	1,356	1,441	1,434	1,240	1,002	751	546	404	284	192	132	79	48	53	13,955
1990	2,097	1,698	1,402	1,354	1,421	1,432	1,274	1,045	796	581	426	299	200	133	79	46	49	14,332
1985-90																		
Migration	342	518	317	157	622	608	512	-6	166	173	21	121	61	23	110	5	90	3,840

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+	Total
Deaths	2	0	0	1	1	2	2	3	3	3	4	6	9	12	14	15	29	
Births			3	118	189	143	80	32	1	0								
Birthrate*			0.001559	0.067007	0.0856	0.0567	0.0401	0.0223	0.001	0								
1990	2,439	2,216	1,719	1,511	2,043	2,040	1,786	1,039	962	754	447	420	261	156	189	51	139	18,172
1991	2,509	2,260	1,818	1,552	1,935	2,039	1,834	1,185	974	792	504	420	283	163	169	56	118	18,612
1992	2,563	2,310	1,906	1,604	1,857	2,016	1,873	1,312	1,013	825	557	431	300	173	155	55	102	19,052
1993	2,604	2,360	1,987	1,663	1,805	1,983	1,899	1,420	1,070	859	605	450	315	183	147	53	89	19,492
1994	2,634	2,409	2,061	1,727	1,775	1,945	1,913	1,512	1,136	897	650	474	331	193	143	51	79	19,930
1995	2,656	2,454	2,130	1,792	1,764	1,910	1,917	1,588	1,207	941	693	503	348	204	141	49	70	20,368
1990-95																		
Migration	-29	327	175	294	492	256	81	162	70	84	29	29	32	79	51	89	166	2,386

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+	Total
Deaths	7	1	1	4	5	6	7	8	7	8	8	9	10	12	13	9	18	
Births			6	127	218	146	98	36	6	1								
Birthrate*			0.002875	0.063263	0.0923	0.0659	0.0421	0.0184	0.0042	0.0005								
1995	2,627	2,781	2,305	2,086	2,256	2,166	1,998	1,750	1,277	1,025	722	532	380	283	192	138	236	22,754
1996	2,822	2,749	2,399	2,126	2,217	2,178	2,024	1,791	1,364	1,067	774	560	399	289	196	139	244	23,337
1997	2,974	2,763	2,468	2,177	2,193	2,180	2,047	1,830	1,441	1,117	823	592	420	298	200	140	251	23,913
1998	3,093	2,805	2,526	2,231	2,185	2,176	2,066	1,865	1,511	1,172	871	627	442	308	204	141	257	24,482
1999	3,187	2,861	2,581	2,286	2,189	2,172	2,081	1,896	1,573	1,230	921	664	466	320	210	143	264	25,044
2000	3,261	2,926	2,636	2,341	2,203	2,169	2,091	1,924	1,628	1,288	972	703	492	334	216	146	270	25,601

Source: Applied Economics, 2001.

* Rate of American Indian male births to American Indian females by age group.

TABLE 13
HISTORIC NATURAL POPULATION GROWTH. ASIAN FEMALE
MARICOPA COUNTY

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	3	0	0	1	1	1	1	1	1	2	3	3	4	4	4	4	11	
Births			1	8	49	64	46	12	1	0								
Birthrate*			0.001996	0.015137	0.0665	0.0814	0.0541	0.0246	0.0023	0								
1980	507	588	501	560	737	786	851	488	444	442	315	235	163	113	95	61	67	6,953
1981	584	572	518	548	701	775	837	559	451	441	338	248	173	118	94	63	66	7,087
1982	643	574	529	541	669	759	824	614	472	441	355	262	184	124	94	65	66	7,217
1983	687	588	538	538	643	740	810	654	499	445	369	277	195	131	96	66	66	7,342
1984	719	607	547	538	621	720	795	684	528	454	382	291	207	138	98	67	67	7,464
1985	742	630	559	539	604	699	779	705	558	467	393	305	219	146	101	68	67	7,581
1980-85 Migration	375	350	403	384	507	802	577	527	208	60	100	44	61	8	15	2	15	4,438

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	3	0	0	1	1	1	1	1	1	1	2	2	3	2	3	3	7	
Births			1	10	54	103	73	20	3	0								
Birthrate*			0.000954	0.010937	0.049	0.0685	0.0539	0.0166	0.0039	0								
1985	1,117	980	962	923	1,111	1,501	1,356	1,232	766	527	493	349	280	154	116	70	82	12,019
1986	1,156	1,007	965	930	1,073	1,422	1,384	1,256	858	573	498	375	291	177	121	76	84	12,246
1987	1,182	1,037	974	937	1,044	1,351	1,391	1,280	936	629	511	397	305	197	129	82	87	12,466
1988	1,197	1,065	986	944	1,022	1,289	1,382	1,301	1,003	688	532	417	320	215	139	88	91	12,679
1989	1,205	1,091	1,002	952	1,005	1,235	1,362	1,316	1,061	749	561	437	336	233	151	94	95	12,884
1990	1,205	1,114	1,019	961	994	1,188	1,336	1,324	1,110	809	596	459	353	250	163	101	99	13,082
1985-90 Migration	327	227	111	282	506	736	823	621	277	411	117	100	77	116	50	16	2	4,798

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	1532	1341	1130	1243	1500	1924	2159	1945	1387	1220	713	559	430	366	213	117	101	
Births			0	21	64	105	100	39	9	0								
Birthrate*			0	0.017068	0.0424	0.0543	0.0461	0.0201	0.0066	0								
1990	1,532	1,341	1,130	1,243	1,500	1,924	2,159	1,945	1,387	1,220	713	559	430	366	213	117	101	17,880
1991	1,559	1,379	1,172	1,219	1,447	1,837	2,110	1,985	1,495	1,250	811	585	451	373	238	131	116	18,158
1992	1,572	1,415	1,213	1,209	1,400	1,757	2,053	2,007	1,590	1,295	895	626	473	383	259	147	132	18,424
1993	1,575	1,446	1,253	1,209	1,360	1,684	1,991	2,013	1,670	1,350	970	674	498	394	277	164	150	18,678
1994	1,569	1,471	1,291	1,216	1,329	1,618	1,928	2,006	1,735	1,410	1,042	728	527	409	294	180	170	18,920
1995	1,557	1,491	1,327	1,230	1,305	1,558	1,863	1,987	1,785	1,470	1,110	785	561	426	310	196	191	19,151
1990-95 Migration	359	408	400	449	1,120	1,004	862	637	564	409	110	78	159	109	64	29	77	6,839

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	2	0	0	0	1	1	1	1	2	2	2	3	4	5	6	7	16	
Births			1	21	84	134	130	53	11	1								
Birthrate*			0.00053	0.012804	0.0347	0.0522	0.0478	0.02	0.0045	0.0006								
1995	1,916	1,899	1,727	1,679	2,425	2,562	2,725	2,624	2,349	1,879	1,220	863	720	535	374	225	268	25,990
1996	1,966	1,902	1,761	1,688	2,275	2,534	2,692	2,643	2,402	1,971	1,349	931	745	567	400	247	294	26,368
1997	1,999	1,915	1,789	1,702	2,157	2,482	2,659	2,652	2,449	2,055	1,471	1,012	778	597	427	270	322	26,735
1998	2,017	1,931	1,814	1,719	2,066	2,416	2,623	2,652	2,488	2,132	1,585	1,100	821	627	454	292	353	27,090
1999	2,024	1,948	1,837	1,738	1,996	2,346	2,581	2,645	2,519	2,201	1,691	1,193	872	660	481	315	386	27,433
2000	2,021	1,963	1,859	1,757	1,944	2,275	2,533	2,631	2,543	2,262	1,790	1,289	932	696	509	338	422	27,764

Source: Applied Economics, 2001.

* Rate of Asian female births to Asian females by age group.

TABLE 14
HISTORIC NATURAL POPULATION GROWTH, ASIAN MALE
MARICOPA COUNTY

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	1	0	0	0	1	1	1	1	1	1	1	2	2	2	2	7	12	
Births			0	8	45	59	42	10	1	0								
Birthrate*			0	0.0143	0.0611	0.0751	0.0494	0.0205	0.0021	0								
1980	473	564	535	633	735	628	647	411	333	301	214	192	133	128	120	63	56	6,166
1981	542	546	541	613	714	649	643	457	348	306	230	194	143	127	119	66	54	6,290
1982	594	545	542	598	693	661	643	494	369	314	243	200	151	127	119	68	52	6,412
1983	633	555	542	587	674	667	646	523	393	323	256	206	158	130	118	70	51	6,531
1984	662	570	544	577	656	667	650	547	418	336	267	214	165	133	118	71	51	6,646
1985	682	588	550	570	639	664	652	566	443	351	279	222	172	137	119	71	51	6,757
1980-85																		
Migratic	452	424	469	589	763	825	667	413	247	147	109	22	53	18	11	5	7	5,220

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	2	0	0	0	1	1	1	1	1	1	2	3	3	4	4	4	6	
Births			1	11	60	113	81	23	2	0								
Birthrate*			0.001	0.0121	0.054	0.0755	0.0594	0.0183	0.0026	0								
1985	1,134	1,012	1,019	1,159	1,402	1,489	1,319	979	690	498	388	244	225	155	130	76	58	11,977
1986	1,191	1,036	1,017	1,131	1,353	1,471	1,352	1,046	746	535	408	270	225	165	131	83	66	12,225
1987	1,231	1,067	1,021	1,107	1,307	1,446	1,374	1,105	805	575	431	295	231	173	134	88	75	12,466
1988	1,257	1,100	1,030	1,090	1,267	1,417	1,387	1,158	863	620	458	319	240	180	138	93	83	12,697
1989	1,271	1,131	1,044	1,077	1,230	1,386	1,392	1,202	920	666	488	343	252	188	142	97	92	12,921
1990	1,278	1,159	1,061	1,070	1,199	1,354	1,389	1,238	975	715	521	368	266	196	147	101	100	13,137
1985-90																		
Migratic	370	169	244	602	737	508	565	380	114	141	123	-3	145	113	-40	1	22	4,191

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	1	0	0	0	1	1	1	1	1	1	2	3	4	5	6	6	12	
Births			0	21	62	103	98	37	9	0								
Birthrate*			0	0.0168	0.0416	0.0534	0.0453	0.019	0.0064	0								
1990	1,648	1,328	1,305	1,672	1,936	1,862	1,954	1,618	1,089	856	644	365	411	309	107	102	122	17,328
1991	1,717	1,392	1,309	1,598	1,883	1,876	1,935	1,684	1,193	901	685	417	398	324	139	97	129	17,676
1992	1,760	1,457	1,326	1,540	1,825	1,877	1,922	1,733	1,290	958	726	467	398	333	166	99	134	18,008
1993	1,783	1,517	1,352	1,497	1,767	1,865	1,912	1,769	1,377	1,023	770	514	408	340	187	106	138	18,327
1994	1,791	1,570	1,385	1,467	1,713	1,845	1,901	1,797	1,453	1,091	818	561	425	347	205	115	144	18,631
1995	1,788	1,614	1,422	1,450	1,663	1,818	1,889	1,816	1,520	1,162	871	607	448	357	220	125	151	18,922
1990-95																		
Migratic	456	566	625	652	1,022	795	444	373	363	268	213	120	124	37	90	60	112	6,319

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	2	0	0	1	1	1	2	2	2	3	3	4	5	6	8	8	18	
Births			1	26	100	159	155	62	13	1								
Birthrate*			0.0006	0.0152	0.0412	0.0619	0.0567	0.0238	0.0054	0.0007								
1995	2,244	2,180	2,047	2,102	2,685	2,613	2,333	2,189	1,883	1,430	1,084	727	572	394	310	185	263	25,241
1996	2,346	2,193	2,073	2,090	2,567	2,626	2,387	2,216	1,942	1,518	1,150	794	598	423	318	201	280	25,721
1997	2,415	2,223	2,097	2,085	2,470	2,613	2,433	2,248	1,994	1,599	1,220	861	632	450	330	215	299	26,185
1998	2,458	2,261	2,122	2,087	2,392	2,583	2,467	2,283	2,043	1,675	1,292	928	672	478	345	228	319	26,633
1999	2,481	2,300	2,149	2,092	2,330	2,544	2,489	2,318	2,088	1,745	1,364	995	717	509	362	241	340	27,064
2000	2,487	2,336	2,179	2,103	2,281	2,500	2,498	2,350	2,132	1,810	1,436	1,063	766	541	381	254	362	27,479

Source: Applied Economics, 2001.

* Rate of Asian male births to Asian females by age group.

TABLE 15
HISTORIC NATURAL POPULATION GROWTH, OTHER FEMALE
MARICOPA COUNTY

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	17	1	1	3	3	3	3	3	4	6	8	9	9	11	13	16	38	
Births			4	210	417	318	133	34	6	1								
Birthrate*			0.0006	0.0312	0.0627	0.0571	0.0315	0.0111	0.0025	0.0005								
1980	7,780	6,883	6,249	6,733	6,653	5,573	4,220	3,064	2,381	1,970	1,780	1,377	959	813	596	405	329	57,765
1981	8,004	7,061	6,375	6,633	6,666	5,786	4,488	3,292	2,513	2,046	1,810	1,448	1,033	831	626	426	312	59,349
1982	8,216	7,248	6,510	6,578	6,656	5,959	4,744	3,528	2,665	2,134	1,848	1,511	1,106	860	653	448	302	60,967
1983	8,416	7,440	6,657	6,562	6,637	6,095	4,984	3,767	2,833	2,234	1,897	1,568	1,176	898	680	470	298	62,611
1984	8,602	7,634	6,812	6,578	6,619	6,201	5,203	4,007	3,015	2,347	1,955	1,624	1,243	941	708	492	299	64,277
1985	8,776	7,826	6,975	6,621	6,607	6,281	5,399	4,242	3,208	2,474	2,024	1,679	1,307	988	738	514	303	65,963
1980-85 Migration	760	186	-35	192	1,738	1,588	563	495	116	-204	-209	-178	45	-89	-37	-56	-34	4,840

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	23	2	2	4	5	5	4	5	5	6	8	10	13	13	16	18	25	
Births			6	240	570	500	250	64	8	1								
Birthrate*			0.0009	0.0352	0.0683	0.0635	0.0419	0.0135	0.0024	0.0004								
1985	9,536	8,012	6,940	6,813	8,345	7,869	5,962	4,737	3,324	2,270	1,815	1,501	1,352	899	701	458	269	70,803
1986	9,737	8,315	7,153	6,835	8,034	7,959	6,339	4,977	3,601	2,474	1,898	1,553	1,369	975	724	487	327	72,756
1987	9,903	8,597	7,384	6,894	7,789	7,969	6,658	5,244	3,870	2,693	2,005	1,611	1,392	1,039	756	514	386	74,704
1988	10,042	8,857	7,625	6,988	7,606	7,928	6,916	5,522	4,139	2,920	2,133	1,678	1,422	1,093	794	540	443	76,646
1989	10,157	9,092	7,869	7,112	7,478	7,859	7,113	5,795	4,409	3,156	2,281	1,757	1,459	1,142	834	568	501	78,580
1990	10,254	9,302	8,112	7,259	7,400	7,778	7,257	6,052	4,679	3,397	2,445	1,849	1,504	1,188	875	597	558	80,508
1985-90 Migration	714	432	269	271	1,071	1,597	619	-64	-360	-426	-303	-161	29	-234	-84	-86	-97	3,185

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	26	2	2	7	9	10	9	9	9	9	9	13	17	15	18	18	33	
Births			10	372	604	463	267	91	16	1								
Birthrate*			0.0012	0.0494	0.0713	0.0494	0.0339	0.0152	0.0037	0.0002								
1990	10,968	9,734	8,381	7,530	8,471	9,375	7,876	5,988	4,319	2,971	2,142	1,688	1,533	954	791	511	461	83,693
1991	11,120	9,979	8,650	7,693	8,274	9,185	8,166	6,356	4,643	3,231	2,298	1,765	1,547	1,053	805	547	523	85,835
1992	11,244	10,205	8,913	7,878	8,149	8,993	8,360	6,708	4,975	3,503	2,473	1,858	1,573	1,134	835	578	588	87,967
1993	11,348	10,411	9,170	8,078	8,087	8,815	8,477	7,028	5,310	3,786	2,667	1,966	1,612	1,203	875	607	653	90,091
1994	11,440	10,596	9,416	8,289	8,076	8,661	8,534	7,307	5,642	4,078	2,878	2,090	1,665	1,265	919	638	720	92,212
1995	11,526	10,763	9,649	8,507	8,110	8,535	8,550	7,541	5,962	4,378	3,105	2,231	1,731	1,324	966	670	787	94,332
1990-95 Migration	898	695	-235	239	1,785	1,217	304	44	-202	-248	-155	-139	1	43	-3	-50	97	4,294

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	26	2	2	8	12	11	13	13	14	13	14	15	19	21	22	22	64	
Births			15	520	834	608	331	124	24	1								
Birthrate*			0.0016	0.0594	0.0843	0.0623	0.0374	0.0163	0.0042	0.0003								
1995	12,424	11,458	9,414	8,746	9,895	9,752	8,854	7,585	5,760	4,130	2,950	2,092	1,732	1,367	963	620	884	98,626
1996	12,616	11,649	9,820	8,871	9,654	9,769	9,020	7,825	6,110	4,442	3,171	2,248	1,784	1,417	1,020	664	935	101,017
1997	12,769	11,841	10,184	9,052	9,486	9,735	9,157	8,050	6,437	4,761	3,410	2,415	1,856	1,467	1,074	709	990	103,394
1998	12,897	12,025	10,512	9,270	9,388	9,674	9,259	8,257	6,743	5,081	3,663	2,595	1,946	1,521	1,127	754	1,050	105,763
1999	13,011	12,197	10,812	9,509	9,354	9,606	9,328	8,442	7,028	5,397	3,928	2,789	2,053	1,581	1,178	799	1,114	108,127
2000	13,117	12,358	11,086	9,761	9,374	9,544	9,370	8,604	7,293	5,706	4,202	2,995	2,176	1,649	1,230	844	1,182	110,492

Source: Applied Economics, 2001.

* Rate of Other female births to Other females by age group.

TABLE 16
HISTORIC NATURAL POPULATION GROWTH. OTHER MALE
MARICOPA COUNTY

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	17	2	3	11	13	14	11	10	11	13	14	13	18	27	34	35	21	
Births			6	237	480	379	162	37	7	1								
Birthrate*			0.00096	0.0352	0.0721	0.068	0.0384	0.0121	0.0029	0.0005								
1980	8,119	6,945	6,311	7,120	6,996	6,218	4,623	3,193	2,478	1,991	1,630	1,304	903	730	521	354	261	59,697
1981	8,376	7,178	6,435	6,947	7,008	6,359	4,930	3,468	2,609	2,075	1,688	1,355	963	736	526	349	257	61,261
1982	8,617	7,415	6,581	6,834	6,983	6,474	5,204	3,749	2,769	2,168	1,750	1,407	1,021	753	532	347	254	62,857
1983	8,843	7,653	6,745	6,773	6,940	6,561	5,445	4,027	2,952	2,273	1,818	1,461	1,076	776	539	346	251	64,479
1984	9,052	7,889	6,924	6,757	6,894	6,622	5,655	4,297	3,153	2,393	1,893	1,517	1,130	805	548	347	249	66,124
1985	9,246	8,119	7,114	6,780	6,854	6,661	5,834	4,555	3,367	2,528	1,976	1,576	1,183	838	561	349	247	67,787
1980-85 Migration	557	213	46	942	2,176	2,240	630	794	236	-145	17	-129	4	37	-17	48	-56	7,586

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	30	3	3	11	17	15	11	12	10	11	14	18	21	22	21	24	23	
Births			5	250	598	502	234	64	10	1								
Birthrate*			0.00072	0.036695	0.0717	0.0638	0.0392	0.0135	0.003	0.0004								
1985	9,803	8,332	7,160	7,722	9,030	8,901	6,464	5,349	3,603	2,383	1,993	1,447	1,179	875	544	397	191	75,373
1986	9,975	8,623	7,391	7,599	8,752	8,912	6,939	5,560	3,941	2,615	2,056	1,536	1,210	912	587	400	204	77,213
1987	10,116	8,891	7,635	7,547	8,506	8,864	7,321	5,823	4,253	2,867	2,152	1,619	1,253	947	626	411	214	79,045
1988	10,232	9,133	7,883	7,554	8,299	8,778	7,616	6,110	4,554	3,130	2,278	1,704	1,302	983	664	426	223	80,867
1989	10,327	9,349	8,129	7,609	8,135	8,667	7,835	6,397	4,852	3,399	2,431	1,796	1,357	1,020	699	445	232	82,680
1990	10,408	9,542	8,370	7,703	8,015	8,546	7,987	6,670	5,147	3,673	2,605	1,898	1,419	1,060	734	466	241	84,483
1985-90 Migration	711	1,015	494	1,010	1,192	1,687	300	82	-548	-577	-136	-259	-132	-153	-245	-52	153	4,543

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	30	2	2	9	11	13	12	13	12	12	14	16	19	20	17	23	58	
Births			11	383	621	476	273	93	17	1								
Birthrate*			0.001253	0.050852	0.0733	0.0507	0.0347	0.0155	0.0038	0.0002								
1990	11,119	10,557	8,864	8,713	9,207	10,233	8,287	6,752	4,599	3,096	2,469	1,639	1,287	907	489	414	394	89,026
1991	11,674	10,667	9,200	8,734	9,097	10,015	8,664	7,046	5,017	3,384	2,580	1,788	1,337	961	553	405	406	91,527
1992	12,119	10,866	9,491	8,818	9,013	9,820	8,922	7,356	5,409	3,697	2,725	1,927	1,406	1,013	612	410	415	94,017
1993	12,480	11,114	9,763	8,944	8,963	9,646	9,088	7,655	5,783	4,024	2,903	2,067	1,487	1,067	668	425	423	96,501
1994	12,779	11,385	10,031	9,098	8,948	9,498	9,187	7,926	6,142	4,359	3,110	2,213	1,579	1,125	722	446	433	98,981
1995	13,033	11,661	10,299	9,275	8,967	9,376	9,236	8,163	6,482	4,698	3,341	2,369	1,680	1,189	774	473	445	101,462
1990-95 Migration	888	1,342	500	1,175	2,251	1,600	413	-182	-255	-229	-194	-131	-37	106	156	58	338	7,798

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	29	2	3	10	15	14	17	17	19	17	18	19	22	27	30	27	100	
Births			16	541	868	632	345	129	25	1								
Birthrate*			0.001655	0.061813	0.0877	0.0648	0.0389	0.017	0.0044	0.0003								
1995	13,921	13,003	10,799	10,450	11,218	10,976	9,649	7,981	6,227	4,469	3,147	2,238	1,643	1,295	930	531	783	109,260
1996	13,919	13,185	11,237	10,510	11,050	11,010	9,897	8,297	6,558	4,803	3,392	2,399	1,738	1,336	971	579	776	111,657
1997	13,918	13,329	11,624	10,645	10,927	11,003	10,102	8,598	6,885	5,135	3,654	2,576	1,845	1,387	1,011	624	778	114,041
1998	13,924	13,445	11,962	10,830	10,856	10,974	10,264	8,880	7,206	5,465	3,928	2,767	1,964	1,448	1,051	665	787	116,417
1999	13,940	13,539	12,255	11,045	10,836	10,936	10,388	9,137	7,518	5,791	4,212	2,974	2,095	1,519	1,095	705	803	118,789
2000	13,969	13,617	12,509	11,276	10,864	10,901	10,479	9,367	7,819	6,114	4,503	3,194	2,240	1,601	1,142	742	823	121,160

Source: Applied Economics, 2001.

* Rate of Other male births to Other females by age group.

TABLE 17
HISTORIC NATURAL POPULATION GROWTH, HISPANIC FEMALE
MARICOPA COUNTY

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	14	1	1	2	3	4	6	6	7	9	12	17	24	27	31	33	74	
Births			12	701	1157	810	371	123	29	1								
Birthrate*			0.00113	0.06243	0.10847	0.08964	0.0502	0.02231	0.00677	0.00027								
1980	12,785	11,604	10,649	11,228	10,667	9,036	7,391	5,512	4,286	3,644	3,224	2,602	1,845	1,498	1,099	697	662	98,429
1981	13,417	11,839	10,839	11,110	10,776	9,358	7,714	5,881	4,524	3,763	3,295	2,709	1,971	1,539	1,145	741	595	101,216
1982	13,982	12,154	11,038	11,055	10,840	9,637	8,037	6,240	4,787	3,906	3,376	2,808	2,091	1,596	1,189	783	554	104,072
1983	14,489	12,518	11,261	11,050	10,880	9,873	8,350	6,592	5,069	4,072	3,468	2,903	2,205	1,664	1,234	823	533	106,985
1984	14,944	12,911	11,511	11,090	10,911	10,070	8,648	6,935	5,365	4,261	3,575	2,997	2,315	1,740	1,282	862	525	109,944
1985	15,356	13,317	11,790	11,173	10,944	10,233	8,925	7,270	5,670	4,471	3,698	3,092	2,419	1,821	1,334	902	527	112,943
1980-85																		
Migration	-66	195	253	-73	1,537	1,656	897	666	265	-135	-13	-186	45	-100	-85	-100	452	5,207

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	17	1		2	3	5	7	8	9	11	15	20	29	33	38	40	113	
Births			12	755	1412	1037	533	176	34	2								
Birthrate*			0.00098	0.06803	0.11315	0.08721	0.05427	0.02216	0.00573	0.00049								
1985	15,290	13,512	12,043	11,100	12,481	11,889	9,822	7,936	5,935	4,336	3,685	2,906	2,464	1,721	1,249	802	979	118,150
1986	16,175	13,866	12,336	11,286	12,201	12,002	10,228	8,305	6,326	4,644	3,800	3,041	2,523	1,834	1,303	847	1,008	121,727
1987	16,906	14,327	12,641	11,494	12,015	12,037	10,576	8,681	6,712	4,969	3,953	3,171	2,596	1,934	1,367	892	1,041	125,312
1988	17,517	14,841	12,977	11,721	11,908	12,027	10,860	9,051	7,096	5,304	4,139	3,304	2,679	2,028	1,435	938	1,079	128,906
1989	18,033	15,375	13,349	11,970	11,867	11,998	11,086	9,404	7,476	5,649	4,354	3,447	2,772	2,117	1,507	987	1,120	132,511
1990	18,478	15,905	13,753	12,244	11,884	11,967	11,261	9,731	7,850	5,999	4,594	3,604	2,873	2,205	1,580	1,037	1,165	136,131
1985-90																		
Migration	3,165	2,232	2,687	3,200	4,169	5,305	3,369	1,940	1,261	557	134	282	666	402	395	203	-21	29,945

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	7	1	1	2	2	2	4	4	6	7	10	15	23	34	44	55	88	
Births			37	1314	2099	1543	841	281	47	3								
Birthrate*			0.00223	0.0851	0.13072	0.08933	0.05748	0.02407	0.00519	0.00051								
1990	21,643	18,137	16,440	15,444	16,053	17,272	14,630	11,671	9,111	6,556	4,728	3,886	3,539	2,607	1,975	1,240	1,144	166,076
1991	23,471	18,837	16,779	15,642	15,929	17,026	15,155	12,258	9,617	7,059	5,083	4,039	3,585	2,757	2,054	1,325	1,285	171,901
1992	24,960	19,763	17,189	15,867	15,870	16,804	15,525	12,833	10,138	7,562	5,467	4,232	3,652	2,884	2,146	1,405	1,432	177,730
1993	26,181	20,802	17,703	16,130	15,867	16,615	15,777	13,366	10,670	8,068	5,874	4,462	3,743	2,998	2,242	1,484	1,582	183,565
1994	27,195	21,877	18,322	16,443	15,918	16,463	15,941	13,843	11,202	8,579	6,300	4,727	3,862	3,106	2,340	1,562	1,735	189,413
1995	28,050	22,939	19,032	16,817	16,021	16,352	16,041	14,257	11,722	9,094	6,742	5,022	4,008	3,215	2,437	1,641	1,890	195,280
1990-95																		
Migration	3,472	6,166	4,866	5,284	8,475	7,897	6,509	4,841	2,827	1,442	1,007	442	485	430	202	96	542	54,983

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	9	1	1	2	2	3	5	7	9	12	15	20	30	46	65	80	291	
Births			45	1557	2495	1815	990	368	72	3								
Birthrate*			0.00188	0.07044	0.10186	0.07484	0.04389	0.01926	0.00494	0.00032								
1995	31,522	29,105	23,898	22,101	24,496	24,249	22,550	19,098	14,549	10,536	7,749	5,464	4,493	3,645	2,639	1,737	2,432	250,263
1996	32,553	29,588	24,938	22,458	24,015	24,295	22,884	19,781	15,449	11,326	8,290	5,899	4,656	3,766	2,770	1,829	2,447	256,945
1997	33,392	30,180	25,867	22,952	23,701	24,236	23,161	20,394	16,305	12,137	8,880	6,354	4,872	3,894	2,896	1,925	2,477	263,622
1998	34,091	30,821	26,729	23,533	23,549	24,125	23,371	20,939	17,112	12,956	9,513	6,834	5,134	4,038	3,020	2,021	2,520	270,305
1999	34,693	31,474	27,546	24,170	23,543	24,007	23,516	21,417	17,866	13,771	10,181	7,343	5,438	4,203	3,144	2,119	2,574	277,006
2000	35,231	32,117	28,331	24,843	23,666	23,911	23,609	21,828	18,565	14,574	10,878	7,882	5,780	4,393	3,273	2,217	2,640	283,737

Source: Applied Economics, 2001.

* Rate of Hispanic female births to Hispanic females by age group.

TABLE 18
HISTORIC NATURAL POPULATION GROWTH, HISPANIC MALE
MARICOPA COUNTY

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	23	2	2	6	10	13	15	16	16	18	24	31	41	45	47	45	71	
Births			13	734	1210	848	389	130	31	3								
Birthrate*			0.001234	0.065357	0.1135	0.0939	0.0526	0.0236	0.0072	0.0008								
1980	13,440	11,714	10,903	12,060	11,090	9,731	7,714	5,535	4,262	3,539	3,053	2,445	1,730	1,325	951	591	491	100,574
1981	14,087	12,057	11,063	11,823	11,274	9,990	8,102	5,954	4,500	3,665	3,126	2,534	1,828	1,358	975	613	437	103,385
1982	14,666	12,462	11,260	11,666	11,373	10,233	8,463	6,365	4,773	3,813	3,209	2,619	1,923	1,402	999	633	404	106,261
1983	15,186	12,901	11,499	11,579	11,421	10,447	8,799	6,765	5,073	3,985	3,304	2,702	2,013	1,455	1,026	653	385	109,191
1984	15,655	13,356	11,777	11,558	11,442	10,628	9,111	7,151	5,392	4,182	3,413	2,787	2,099	1,513	1,057	672	375	112,166
1985	16,081	13,814	12,091	11,596	11,454	10,776	9,396	7,521	5,723	4,401	3,539	2,875	2,183	1,574	1,091	692	372	115,180
1980-85																		
Migration	-140	654	397	738	2,496	1,793	1,153	1,194	466	-32	56	29	184	-30	-1	55	432	9,443

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	28	2	2	7	13	16	19	20	19	22	29	38	51	56	58	56	138	
Births			12	778	1,455	1,068	550	181	34	2	0							
Birthrate*			0.001012	0.070069	0.1165	0.0898	0.056	0.0228	0.0058	0.0005	0							
1985	15,941	14,468	12,488	12,334	13,950	12,569	10,549	8,715	6,189	4,369	3,595	2,904	2,367	1,544	1,090	747	804	124,623
1986	16,804	14,760	12,882	12,358	13,614	12,829	10,934	9,061	6,673	4,709	3,719	3,002	2,421	1,646	1,118	755	790	128,074
1987	17,517	15,167	13,255	12,455	13,351	12,970	11,293	9,414	7,129	5,076	3,885	3,104	2,482	1,736	1,158	766	779	131,536
1988	18,113	15,635	13,635	12,608	13,160	13,029	11,607	9,768	7,562	5,459	4,090	3,217	2,550	1,816	1,205	781	772	135,008
1989	18,619	16,128	14,032	12,806	13,037	13,039	11,871	10,112	7,978	5,850	4,328	3,347	2,626	1,892	1,256	801	769	138,492
1990	19,056	16,624	14,449	13,044	12,979	13,022	12,083	10,440	8,379	6,244	4,595	3,496	2,710	1,964	1,309	826	769	141,991
1985-90																		
Migration	2,547	4,061	2,638	3,542	5,148	5,849	3,301	2,109	1,262	108	473	111	489	235	-7	107	79	32,050

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	15	1	2	7	9	11	15	17	19	21	24	35	54	75	88	93	76	
Births			37	1354	2160	1590	865	289	48	3								
Birthrate*			0.002251	0.087672	0.1346	0.0921	0.0591	0.0248	0.0053	0.0005								
1990	21,603	20,685	17,087	16,586	18,127	18,871	15,384	12,549	9,641	6,352	5,068	3,607	3,199	2,199	1,302	933	848	174,041
1991	23,612	20,867	17,805	16,680	17,810	18,711	16,066	13,099	10,202	6,987	5,299	3,861	3,225	2,317	1,381	906	942	179,770
1992	25,245	21,415	18,415	16,898	17,575	18,520	16,579	13,674	10,760	7,606	5,609	4,108	3,295	2,414	1,462	901	1,023	185,499
1993	26,582	22,179	19,013	17,194	17,430	18,320	16,951	14,236	11,320	8,210	5,980	4,366	3,399	2,502	1,541	912	1,096	191,231
1994	27,688	23,058	19,644	17,551	17,374	18,131	17,209	14,760	11,880	8,803	6,395	4,643	3,532	2,590	1,616	934	1,164	196,972
1995	28,619	23,983	20,324	17,962	17,401	17,969	17,377	15,230	12,431	9,388	6,843	4,945	3,690	2,684	1,688	963	1,230	202,727
1990-95																		
Migration	6,297	8,423	6,448	8,306	10,109	9,223	6,687	4,525	2,842	1,704	1,061	634	492	714	739	446	847	69,497

Year	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Total
Deaths	18	2	2	9	11	13	20	25	28	32	37	47	69	99	127	137	315	
Births			47	1619	2595	1887	1029	382	75	4								
Birthrate*			0.001955	0.073248	0.1059	0.0778	0.0456	0.02	0.0051	0.0004								
1995	34,916	32,406	26,772	26,268	27,510	27,192	24,064	19,755	15,273	11,092	7,904	5,579	4,182	3,398	2,427	1,409	2,077	272,224
1996	35,553	32,906	27,896	26,360	27,250	27,243	24,669	20,591	16,139	11,894	8,501	5,993	4,388	3,451	2,484	1,456	2,001	278,777
1997	36,076	33,434	28,896	26,659	27,061	27,231	25,163	21,380	16,998	12,707	9,136	6,440	4,632	3,533	2,537	1,501	1,944	285,327
1998	36,525	33,960	29,801	27,097	26,969	27,184	25,556	22,109	17,841	13,526	9,804	6,921	4,912	3,643	2,593	1,542	1,903	291,887
1999	36,928	34,471	30,630	27,629	26,984	27,128	25,860	22,770	18,660	14,348	10,498	7,434	5,226	3,783	2,656	1,583	1,876	298,465
2000	37,309	34,961	31,395	28,220	27,101	27,086	26,092	23,359	19,446	15,167	11,215	7,979	5,575	3,953	2,731	1,623	1,859	305,072

Source: Applied Economics, 2001.

* Rate of Hispanic male births to Hispanic females by age group.

TABLE 19
POPULATION 16 YEARS AND OLDER
MARICOPA COUNTY 1980

		16-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total
White	F	45,181	61,386	56,533	52,080	42,034	34,096	31,741	33,525	37,043	35,204	33,655	26,384	34,694	523,556
	M	46,965	62,695	56,874	51,950	41,136	33,323	31,005	30,374	31,279	29,422	27,198	21,026	23,112	486,359
	T	92,146	124,081	113,407	104,030	83,170	67,419	62,746	63,899	68,322	64,626	60,853	47,410	57,806	1,009,915
Black	F	2,177	2,600	2,216	1,665	1,293	1,086	971	889	782	647	661	443	614	16,044
	M	2,409	2,804	2,336	1,916	1,289	1,135	989	812	680	638	509	384	445	16,346
	T	4,586	5,404	4,552	3,581	2,582	2,221	1,960	1,701	1,462	1,285	1,170	827	1,059	32,390
American Indian	F	1,291	1,482	1,096	885	715	541	431	337	286	196	193	119	165	7,737
	M	1,265	1,296	971	807	599	453	353	270	229	173	129	118	171	6,834
	T	2,556	2,778	2,067	1,692	1,314	994	784	607	515	369	322	237	336	14,571
Asian	F	452	737	786	851	488	444	442	315	235	163	113	95	128	5,249
	M	512	735	628	647	411	333	301	214	192	133	128	120	119	4,473
	T	964	1,472	1,414	1,498	899	777	743	529	427	296	241	215	247	9,722
Other	F	5,425	6,653	5,573	4,220	3,064	2,381	1,970	1,780	1,377	959	813	596	734	35,545
	M	5,771	6,996	6,218	4,623	3,193	2,478	1,991	1,630	1,304	903	730	521	615	36,973
	T	11,196	13,649	11,791	8,843	6,257	4,859	3,961	3,410	2,681	1,862	1,543	1,117	1,349	72,519
Hispanic*	F	9,003	10,667	9,036	7,391	5,512	4,286	3,644	3,224	2,602	1,845	1,498	1,099	1,359	61,166
	M	9,720	11,090	9,731	7,714	5,535	4,262	3,539	3,053	2,445	1,730	1,325	951	1,082	62,177
	T	18,723	21,757	18,767	15,105	11,047	8,548	7,183	6,277	5,047	3,575	2,823	2,050	2,441	123,343
County	F	54,526	72,858	66,204	59,701	47,594	38,548	35,555	36,846	39,723	37,169	35,435	27,637	36,335	588,131
	M	56,922	74,526	67,027	59,943	46,628	37,722	34,639	33,300	33,684	31,269	28,694	22,169	24,462	550,985
	T	111,448	147,384	133,231	119,644	94,222	76,270	70,194	70,146	73,407	68,438	64,129	49,806	60,797	1,139,116

Sources: U.S. Bureau of the Census, 1980; Applied Economics, 2001.

* Hispanic persons are included in all races.

TABLE 20
TOTAL LABOR FORCE
MARICOPA COUNTY 1980

		16-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total
White	F	25,397	44,255	38,468	34,274	27,959	22,151	19,553	18,103	17,386	10,035	3,734	1,578	697	263,590
	M	30,074	54,591	53,454	49,596	39,850	31,518	29,129	26,755	24,319	15,455	6,484	2,798	1,447	365,470
	T	55,471	98,847	91,922	83,870	67,809	53,670	48,682	44,858	41,705	25,490	10,218	4,375	2,143	629,060
Black	F	1,081	1,586	1,816	1,209	887	725	631	475	393	199	95	69	39	9,207
	M	1,198	2,355	1,978	1,684	1,060	1,020	816	548	533	379	111	51	31	11,763
	T	2,279	3,941	3,794	2,893	1,947	1,745	1,447	1,023	926	579	206	120	70	20,970
Hispanic*	F	3,857	6,550	5,226	3,987	3,466	2,411	1,865	1,355	853	347	128	49	36	30,129
	M	5,716	9,433	8,911	7,439	5,188	3,867	3,132	2,696	1,904	1,045	403	185	117	50,036
	T	9,574	15,983	14,136	11,426	8,654	6,278	4,997	4,052	2,757	1,391	531	233	152	80,165
County	F	29,467	50,923	44,573	38,929	31,551	24,570	21,790	19,680	18,408	10,600	3,981	1,693	778	296,942
	M	35,226	64,175	62,387	57,092	44,720	35,395	32,163	29,131	26,241	16,624	6,891	3,029	1,565	414,640
	T	64,693	115,098	106,960	96,020	76,271	59,965	53,954	48,811	44,649	27,224	10,872	4,722	2,342	711,582

Sources: U.S. Bureau of the Census, 1980; Applied Economics, 2001.

* Hispanic persons are included in all races.

TABLE 21
LABOR FORCE PARTICIPATION RATE
MARICOPA COUNTY 1980

		16-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total
White	F	56.2%	72.1%	68.0%	65.8%	66.5%	65.0%	61.6%	54.0%	46.9%	28.5%	11.1%	6.0%	2.0%	50.3%
	M	64.0%	87.1%	94.0%	95.5%	96.9%	94.6%	93.9%	88.1%	77.7%	52.5%	23.8%	13.3%	6.3%	75.1%
	T	60.2%	79.7%	81.1%	80.6%	81.5%	79.6%	77.6%	70.2%	61.0%	39.4%	16.8%	9.2%	3.7%	62.3%
Black	F	49.7%	61.0%	82.0%	72.6%	68.6%	66.8%	65.0%	53.5%	50.2%	30.8%	14.3%	15.7%	6.4%	57.4%
	M	49.7%	84.0%	84.7%	87.9%	82.3%	89.9%	82.5%	67.4%	78.4%	59.4%	21.8%	13.2%	6.9%	72.0%
	T	49.7%	72.9%	83.4%	80.8%	75.4%	78.6%	73.8%	60.1%	63.3%	45.0%	17.6%	14.6%	6.6%	64.7%
Hispanic*	F	42.8%	61.4%	57.8%	53.9%	62.9%	56.2%	51.2%	42.0%	32.8%	18.8%	8.5%	4.4%	2.6%	49.3%
	M	58.8%	85.1%	91.6%	96.4%	93.7%	90.7%	88.5%	88.3%	77.9%	60.4%	30.4%	19.4%	10.8%	80.5%
	T	51.1%	73.5%	75.3%	75.6%	78.3%	73.4%	69.6%	64.5%	54.6%	38.9%	18.8%	11.4%	6.2%	65.0%
County	F	54.0%	69.9%	67.3%	65.2%	66.3%	63.7%	61.3%	53.4%	46.3%	28.5%	11.2%	6.1%	2.1%	50.5%
	M	61.9%	86.1%	93.1%	95.2%	95.9%	93.8%	92.9%	87.5%	77.9%	53.2%	24.0%	13.7%	6.4%	75.3%
	T	58.0%	78.1%	80.3%	80.3%	80.9%	78.6%	76.9%	69.6%	60.8%	39.8%	17.0%	9.5%	3.9%	62.5%

Sources: U.S. Bureau of the Census, 1980; Applied Economics, 2001.

* Hispanic persons are included in all races.

TABLE 22
CIVILIAN EMPLOYMENT
MARICOPA COUNTY, 1980

		16-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total
White	F	22,605	41,573	36,411	32,758	26,942	21,528	18,954	17,482	16,725	9,631	3,598	1,444	625	250,276
	M	25,883	48,062	48,765	46,548	37,670	30,309	28,047	25,837	23,441	14,946	6,204	2,661	1,400	339,772
	T	48,488	89,635	85,175	79,306	64,612	51,837	47,001	43,319	40,166	24,576	9,802	4,104	2,025	590,048
Black	F	856	1,317	1,635	1,118	836	701	623	445	373	181	91	61	39	8,275
	M	775	1,619	1,545	1,467	876	927	741	532	520	344	103	41	31	9,519
	T	1,630	2,936	3,180	2,584	1,712	1,627	1,364	977	892	525	194	102	70	17,794
Hispanic	F	3,145	5,959	4,794	3,810	3,289	2,299	1,767	1,298	777	318	118	40	30	27,642
	M	4,575	8,097	8,102	6,903	4,889	3,606	2,973	2,615	1,816	973	374	157	111	45,189
	T	7,720	14,056	12,895	10,713	8,177	5,904	4,740	3,913	2,593	1,291	492	196	140	72,831
County	F	25,905	47,385	41,938	37,168	30,317	23,794	21,080	18,983	17,655	10,160	3,840	1,546	702	280,472
	M	29,781	55,910	56,484	53,406	42,178	33,849	30,928	28,118	25,290	16,039	6,588	2,873	1,518	382,962
	T	55,686	103,294	98,422	90,574	72,494	57,643	52,008	47,102	42,945	26,199	10,428	4,419	2,219	663,434

Sources: U.S. Bureau of the Census, 1980; Applied Economics, 2001.

* Hispanic persons are included in all races.

TABLE 23
CIVILIAN UNEMPLOYMENT
MARICOPA COUNTY, 1980

		16-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total
White	F	2,709	2,270	1,801	1,435	993	616	594	621	646	396	136	134	71	12,423
	M	3,640	3,956	2,882	1,840	1,151	847	906	850	837	509	280	137	47	17,882
	T	6,349	6,226	4,683	3,275	2,144	1,463	1,501	1,471	1,483	905	416	271	118	30,305
Black	F	201	211	155	92	45	24	8	30	20	18	4	8	0	817
	M	343	353	202	60	49	47	65	9	13	35	8	10	0	1,194
	T	545	564	357	151	94	71	73	39	33	53	12	18	0	2,011
Hispanic	F	681	548	416	169	177	107	98	57	76	29	10	9	6	2,384
	M	1,048	1,080	747	492	252	209	153	72	80	72	29	28	6	4,268
	T	1,729	1,628	1,163	661	429	316	251	129	156	101	39	37	12	6,652
County	F	3,437	3,012	2,343	1,671	1,204	764	707	697	739	431	141	147	76	15,367
	M	4,709	5,105	3,788	2,264	1,317	1,090	1,038	937	902	585	303	156	47	22,240
	T	8,146	8,118	6,130	3,935	2,521	1,853	1,744	1,634	1,641	1,016	444	303	123	37,607

Sources: U.S. Bureau of the Census, 1980; Applied Economics, 2001.

* Hispanic persons are included in all races.

TABLE 24
POPULATION 16 YEARS AND OLDER
MARICOPA COUNTY 1990

		16-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total
White	F	45,787	63,294	80,920	81,512	71,967	64,441	52,000	42,481	37,290	41,272	44,761	38,945	63,498	728,168
	M	47,989	66,522	83,393	83,636	71,090	64,196	50,383	39,725	35,093	35,126	36,392	29,659	39,362	682,566
	T	93,776	129,816	164,313	165,148	143,057	128,637	102,383	82,206	72,383	76,398	81,153	68,604	102,860	1,410,734
Black	F	2,281	3,161	3,549	3,436	2,964	2,157	1,649	1,513	1,112	1,079	959	669	1,148	25,677
	M	2,727	3,116	3,740	3,565	3,055	2,553	1,712	1,147	1,076	896	593	448	613	25,241
	T	5,008	6,277	7,289	7,001	6,019	4,710	3,361	2,660	2,188	1,975	1,552	1,117	1,761	50,918
American Indian	F	1,415	2,208	2,520	1,993	1,438	1,043	738	635	478	332	273	126	311	13,510
	M	1,300	2,043	2,040	1,786	1,039	962	754	447	420	261	156	189	190	11,587
	T	2,715	4,251	4,560	3,779	2,477	2,005	1,492	1,082	898	593	429	315	501	25,097
Asian	F	1,057	1,500	1,924	2,159	1,945	1,387	1,220	713	559	430	366	213	218	13,691
	M	1,394	1,936	1,862	1,954	1,618	1,089	856	644	365	411	309	107	224	12,769
	T	2,451	3,436	3,786	4,113	3,563	2,476	2,076	1,357	924	841	675	320	442	26,460
Other	F	6,048	8,471	9,375	7,876	5,988	4,319	2,971	2,142	1,688	1,533	954	791	972	53,128
	M	7,088	9,207	10,233	8,287	6,752	4,599	3,096	2,469	1,639	1,287	907	489	808	56,861
	T	13,136	17,678	19,608	16,163	12,740	8,918	6,067	4,611	3,327	2,820	1,861	1,280	1,780	109,989
Hispanic*	F	12,229	16,053	17,272	14,630	11,671	9,111	6,556	4,728	3,886	3,539	2,607	1,975	2,384	106,641
	M	13,388	18,127	18,871	15,384	12,549	9,641	6,352	5,068	3,607	3,199	2,199	1,302	1,781	111,468
	T	25,617	34,180	36,143	30,014	24,220	18,752	12,908	9,796	7,493	6,738	4,806	3,277	4,165	218,109
County	F	56,588	78,634	98,288	96,976	84,302	73,347	58,578	47,484	41,127	44,646	47,313	40,744	66,147	834,174
	M	60,498	82,824	101,268	99,228	83,554	73,399	56,801	44,432	38,593	37,981	38,357	30,892	41,197	789,024
	T	117,086	161,458	199,556	196,204	167,856	146,746	115,379	91,916	79,720	82,627	85,670	71,636	107,344	1,623,198

Sources: U.S. Bureau of the Census, 1990; Applied Economics, 2001.

* Hispanic persons are included in all races.

TABLE 25
TOTAL LABOR FORCE
MARICOPA COUNTY 1990

		16-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total
White	F	26,135	48,845	61,650	61,328	55,346	51,633	39,512	30,441	21,116	13,792	6,820	2,123	1,206	419,949
	M	28,769	58,081	77,867	79,902	66,255	58,297	47,602	35,494	28,137	18,270	8,232	3,810	2,508	513,223
	T	54,904	106,926	139,517	141,231	121,601	109,930	87,114	65,935	49,253	32,062	15,052	5,933	3,714	933,172
Black	F	1,129	2,214	2,433	2,456	2,498	1,726	1,282	883	406	331	97	98	19	15,574
	M	1,264	2,206	3,201	3,044	2,669	2,271	1,377	984	632	125	253	20	76	18,122
	T	2,394	4,420	5,634	5,500	5,167	3,997	2,659	1,867	1,039	457	350	118	95	33,696
American Indian	F	447	1,467	1,938	1,422	1,062	654	373	401	149	135	25	0	19	8,092
	M	571	1,523	1,718	1,564	887	641	721	319	312	97	32	0	0	8,385
	T	1,018	2,990	3,657	2,985	1,949	1,294	1,095	720	461	232	57	0	19	16,477
Asian	F	392	1,110	1,181	1,357	1,386	883	1,078	423	272	157	19	0	0	8,258
	M	797	1,270	1,473	1,826	1,608	1,072	690	626	340	253	120	0	20	10,096
	T	1,189	2,380	2,655	3,182	2,994	1,955	1,768	1,049	613	410	139	0	20	18,354
Other	F	2,803	4,740	5,937	5,045	4,468	3,156	2,097	1,517	817	187	18	23	60	30,867
	M	4,182	7,952	8,864	7,680	6,739	4,398	2,637	1,806	1,393	669	323	20	63	46,727
	T	6,985	12,692	14,801	12,726	11,207	7,554	4,734	3,323	2,209	857	340	43	123	77,594
Hispanic*	F	5,274	8,952	10,819	9,248	7,731	6,740	4,908	3,565	2,289	1,410	535	357	165	61,993
	M	7,382	15,044	16,786	13,999	11,399	8,728	5,950	4,464	3,094	1,748	752	178	284	89,807
	T	12,656	23,996	27,605	23,247	19,131	15,468	10,858	8,029	5,382	3,159	1,286	535	449	151,800
County	F	30,906	58,377	73,140	71,608	64,761	58,052	44,342	33,664	22,761	14,603	6,979	2,244	1,304	482,740
	M	35,583	71,032	93,124	94,016	78,158	66,679	53,028	39,230	30,814	19,414	8,960	3,850	2,667	596,554
	T	66,490	129,408	166,263	165,624	142,918	124,731	97,369	72,894	53,574	34,017	15,939	6,094	3,971	1,079,294

Sources: U.S. Bureau of the Census, 1990; Applied Economics, 2001.

* Hispanic persons are included in all races.

TABLE 26
LABOR FORCE PARTICIPATION RATE
MARICOPA COUNTY 1990

		16-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total
White	F	57.1%	77.2%	76.2%	75.2%	76.9%	80.1%	76.0%	71.7%	56.6%	33.4%	15.2%	5.5%	1.9%	57.7%
	M	59.9%	87.3%	93.4%	95.5%	93.2%	90.8%	94.5%	89.3%	80.2%	52.0%	22.6%	12.8%	6.4%	75.2%
	T	58.5%	82.4%	84.9%	85.5%	85.0%	85.5%	85.1%	80.2%	68.0%	42.0%	18.5%	8.6%	3.6%	66.1%
Black	F	49.5%	70.0%	68.6%	71.5%	84.3%	80.0%	77.7%	58.3%	36.5%	30.7%	10.2%	14.7%	1.7%	60.7%
	M	46.4%	70.8%	85.6%	85.4%	87.4%	88.9%	80.4%	85.8%	58.8%	14.0%	42.6%	4.5%	12.4%	71.8%
	T	47.8%	70.4%	77.3%	78.6%	85.8%	84.9%	79.1%	70.2%	47.5%	23.1%	22.6%	10.6%	5.4%	66.2%
American Indian	F	31.6%	66.4%	76.9%	71.3%	73.9%	62.7%	50.6%	63.1%	31.2%	40.6%	9.0%	0.0%	6.1%	59.9%
	M	43.9%	74.5%	84.2%	87.5%	85.3%	66.6%	95.7%	71.4%	74.2%	37.1%	20.7%	0.0%	0.0%	72.4%
	T	37.5%	70.3%	80.2%	79.0%	78.7%	64.6%	73.4%	66.6%	51.3%	39.1%	13.3%	0.0%	3.8%	65.7%
Asian	F	37.1%	74.0%	61.4%	62.8%	71.3%	63.7%	88.3%	59.3%	48.7%	36.5%	5.2%	0.0%	0.0%	60.3%
	M	57.2%	65.6%	79.1%	93.4%	99.4%	98.4%	80.6%	97.3%	93.3%	61.6%	38.8%	0.0%	8.8%	79.1%
	T	48.5%	69.3%	70.1%	77.4%	84.0%	79.0%	85.2%	77.3%	66.3%	48.8%	20.6%	0.0%	4.5%	69.4%
Other	F	46.4%	56.0%	63.3%	64.1%	74.6%	73.1%	70.6%	70.8%	48.4%	12.2%	1.9%	2.9%	6.2%	58.1%
	M	59.0%	86.4%	86.6%	92.7%	99.8%	95.6%	85.2%	73.2%	85.0%	52.0%	35.6%	4.2%	7.8%	82.2%
	T	53.2%	71.8%	75.5%	78.7%	88.0%	84.7%	78.0%	72.1%	66.4%	30.4%	18.3%	3.4%	6.9%	70.5%
Hispanic*	F	43.1%	55.8%	62.6%	63.2%	66.2%	74.0%	74.9%	75.4%	58.9%	39.9%	20.5%	18.1%	6.9%	58.1%
	M	55.1%	83.0%	88.9%	91.0%	90.8%	90.5%	93.7%	88.1%	85.8%	54.7%	34.2%	13.7%	16.0%	80.6%
	T	49.4%	70.2%	76.4%	77.5%	79.0%	82.5%	84.1%	82.0%	71.8%	46.9%	26.8%	16.3%	10.8%	69.6%
County	F	54.6%	74.2%	74.4%	73.8%	76.8%	79.1%	75.7%	70.9%	55.3%	32.7%	14.8%	5.5%	2.0%	57.9%
	M	58.8%	85.8%	92.0%	94.7%	93.5%	90.8%	93.4%	88.3%	79.8%	51.1%	23.4%	12.5%	6.5%	75.6%
	T	56.8%	80.1%	83.3%	84.4%	85.1%	85.0%	84.4%	79.3%	67.2%	41.2%	18.6%	8.5%	3.7%	66.5%

Sources: U.S. Bureau of the Census, 1990; Applied Economics, 2001.

* Hispanic persons are included in all races.

TABLE 27
CIVILIAN EMPLOYMENT
MARICOPA COUNTY 1990

		16-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total
White	F	22,522	45,867	58,446	58,643	52,903	49,691	37,781	29,224	20,142	13,136	6,521	2,017	1,094	397,985
	M	24,132	51,087	72,239	75,409	62,525	55,729	45,435	33,883	26,757	17,365	7,844	3,703	2,453	478,563
	T	46,654	96,954	130,686	134,052	115,428	105,420	83,216	63,107	46,898	30,501	14,365	5,720	3,547	876,548
Black	F	807	1,827	2,049	2,079	2,295	1,638	1,212	815	388	273	96	97	8	13,584
	M	981	1,724	2,412	2,569	2,321	2,022	1,262	905	605	124	239	20	32	15,219
	T	1,788	3,551	4,461	4,648	4,617	3,660	2,474	1,719	993	397	336	117	41	28,803
American Indian	F	344	1,173	1,751	1,315	892	597	317	371	146	132	24	0	19	7,082
	M	430	1,224	1,415	1,182	753	533	690	314	250	76	18	0	0	6,885
	T	774	2,397	3,166	2,498	1,645	1,130	1,007	685	396	208	42	0	19	13,967
Asian	F	328	948	1,117	1,296	1,367	836	1,027	425	274	158	19	0	0	7,796
	M	612	1,086	1,399	1,697	1,656	973	679	612	333	255	102	0	20	9,426
	T	940	2,035	2,516	2,994	3,023	1,809	1,706	1,038	607	414	121	0	20	17,222
Other	F	2,035	4,070	5,509	4,454	3,944	2,925	2,066	1,437	731	188	18	23	60	27,460
	M	3,114	7,241	8,151	6,898	6,323	3,961	2,387	1,601	1,267	655	243	21	64	41,925
	T	5,149	11,311	13,659	11,351	10,267	6,886	4,453	3,038	1,998	844	261	43	124	69,385
Hispanic*	F	4,124	7,769	9,891	8,452	6,957	6,366	4,745	3,379	2,029	1,299	531	330	130	56,001
	M	5,865	13,596	15,391	12,717	10,346	8,126	5,559	4,050	2,873	1,626	663	160	285	81,257
	T	9,989	21,366	25,282	21,170	17,302	14,491	10,305	7,429	4,902	2,925	1,194	489	416	137,258
County	F	26,032	53,918	68,946	67,818	61,397	55,653	42,383	32,253	21,661	13,871	6,664	2,129	1,181	453,907
	M	29,293	62,455	85,674	87,774	73,594	63,163	50,420	37,279	29,180	18,460	8,429	3,734	2,564	552,018
	T	55,326	116,373	154,620	155,592	134,992	118,816	92,803	69,531	50,841	32,331	15,093	5,863	3,745	1,005,925

Sources: U.S. Bureau of the Census, 1990; Applied Economics, 2001.

* Hispanic persons are included in all races.

TABLE 28
CIVILIAN UNEMPLOYMENT
MARICOPA COUNTY 1990

		16-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total
White	F	3,468	2,761	3,060	2,536	2,321	1,949	1,712	1,217	977	657	301	106	109	21,176
	M	4,411	4,867	3,833	3,643	2,833	2,192	1,984	1,598	1,356	908	389	106	55	28,176
	T	7,880	7,628	6,893	6,178	5,154	4,142	3,696	2,815	2,333	1,565	690	213	164	49,352
Black	F	352	368	368	350	197	50	62	66	15	62	0	0	12	1,902
	M	241	293	606	322	254	185	84	76	23	0	12	0	45	2,141
	T	593	661	974	673	451	235	146	141	39	62	12	0	57	4,043
American Indian	F	109	310	173	90	174	51	58	25	0	0	0	0	0	991
	M	157	300	230	383	119	88	22	0	67	23	17	0	0	1,406
	T	266	610	403	474	293	139	80	25	67	23	17	0	0	2,397
Asian	F	59	131	63	61	25	46	51	0	0	0	0	0	0	436
	M	147	163	77	104	24	115	0	18	9	0	17	0	0	673
	T	206	294	141	164	49	161	51	18	9	0	17	0	0	1,109
Other	F	748	643	439	559	523	236	40	84	86	0	0	0	0	3,357
	M	1,012	591	657	740	440	381	246	200	124	16	75	0	0	4,484
	T	1,760	1,234	1,096	1,299	963	618	286	284	210	16	75	0	0	7,841
Hispanic*	F	1,202	1,171	902	742	758	356	140	175	264	110	0	26	36	5,884
	M	1,453	1,303	1,242	1,180	938	572	382	413	223	124	87	18	0	7,935
	T	2,655	2,474	2,144	1,922	1,696	928	522	588	487	234	87	45	36	13,819
County	F	4,738	4,185	4,081	3,581	3,235	2,361	1,939	1,397	1,093	717	306	108	121	27,862
	M	6,021	6,204	5,376	5,188	3,661	2,977	2,333	1,893	1,572	939	514	105	95	36,880
	T	10,759	10,389	9,457	8,769	6,896	5,338	4,272	3,290	2,665	1,656	820	213	216	64,742

Sources: U.S. Bureau of the Census, 1990; Applied Economics, 2001.

* Hispanic persons are included in all races.